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Understanding the Early Years

Early Childhood Development in the Saskatoon Community, Saskatchewan

An Analysis of the
Communities Survey

The views expressed in this report are those of the authors and do not necessarily reflect the position of Human Resources and Skills Development Canada or of the federal government. All narrations and data analysis results presented here were prepared by the authors.

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Foreword

Early childhood is a key time for growth and development as children interact with the world around them: their families, other children, childcare providers, community programmers and more. Research shows that while what happens in early childhood does not *determine* what happens later, it does place children on developmental pathways that become increasingly difficult to alter as time passes.¹

There is strong consensus that one of the key “enabling conditions” for healthy child development is supportive communities – communities that are safe and secure and that provide access to programs and services for families with children. In turn, the future of our communities is dependent on the healthy development of their children. Given the important role communities play in healthy child development, it is critical that policy and program decisions taken at that level be based on a sound understanding of the outcomes and needs of children in the community.

Understanding the Early Years (UEY) is a national initiative that provides communities with local information that can help them make informed decisions about the most appropriate programs and services for their young children. Information collected through the UEY initiative helps communities understand how their children are doing physically, socially and cognitively, as well as how families and the community are supporting those children. Parents, educators, community organizations and others learn about what is going well in their community and work together to make their community a better place for young children and their families.

This report for the Saskatoon community is one of seven community reports produced for the second pilot phase of the UEY initiative. The reports describe the developmental outcomes of young children, and explore how these outcomes are influenced by demographic characteristics and by family and community factors in each of the seven communities that have participated in the initiative since 2001. The seven communities are Hampton/Sussex, New Brunswick; Montréal, Quebec; Niagara Falls, Ontario; Dixie Bloor (Mississauga), Ontario; South Eastman, Manitoba; Saskatoon, Saskatchewan; and Abbotsford, British Columbia.

The Saskatoon report provides a profile of how young children in the community are doing, based on an analysis of two cycles of data collected in 2001 and 2005 by Statistics Canada, using the Communities Survey (adapted from the National Longitudinal Survey of Children and Youth). Specifically, the report provides findings about the developmental outcomes of kindergarten children, including outcomes relating to their physical health and well-being, cognitive skills and behaviours. The report also explores factors that may be related to these children’s outcomes, by looking at changes in demographics, family processes and community factors between 2001 and 2005.

We hope that the Saskatoon community – parents, educators, schools, businesses and community organizations – can draw useful information from this report. In better understanding how well their youngest citizens are developing and the variables that may influence that development, they can work together to improve the community for their young children.

We also hope that the community profiles in the set of seven reports provide valuable lessons about the needs and strengths of communities with different economic, social and physical characteristics, as well as about factors that enable young children to thrive.

John Connolly, Director

Partnerships Division
Community Development and Partnerships
Directorate (CDPD)
Human Resources and Social Development Canada
(HRSDC)

Mireille Laroche, Director

Research Division
Strategic Policy Research Directorate (SPRD)
Human Resources and Social Development
Canada (HRSDC)

¹ Moore, 2005:17.

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Authors

Gong-Li Xu (Community Development and Partnerships Directorate, HRSDC)

Nina Ahmed (Strategic Policy Research Directorate, HRSDC)

Chahreddine Abbes (Strategic Policy Research Directorate, HRSDC)

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Executive Summary

This report presents survey findings from two cycles of data collection in Saskatoon, Saskatchewan. The study was conducted by Statistics Canada as part of the second pilot phase of the Understanding the Early Years initiative (UEY-II), using the Communities Survey, a research tool adapted from the National Longitudinal Survey of Children and Youth (NLSCY). The first cycle of data collection took place in 2001, and the second cycle occurred in 2005.

The Communities Survey consisted of two main activities: direct assessments of kindergarten children in Saskatoon and interviews with parents.² The results from the survey paint a portrait of early childhood outcomes in Saskatoon, including outcomes related to physical health and well-being, cognitive skills and behaviour. The parental interviews offered information on a plethora of factors that may have influenced these developmental outcomes. The factors include the demographic characteristics of the children (e.g., age, gender), family income, parental education, parenting practices, childcare arrangements, literacy activities in the home, mutual support among neighbours, neighbourhood quality and safety, and use of the community's recreational, cultural and educational resources.

By analyzing the two cycles of survey data together, the report also offers some insights into changes in demographic characteristics, family processes and community factors in Saskatoon between 2001 and 2005, and how these changes may have affected the development of kindergarten children living in the community.

To facilitate understanding of the survey results, the developmental outcomes of Saskatoon children are compared with the averages for the seven UEY-II pilot communities and, where possible, with averages for Canada as a whole.

The remainder of this summary presents highlights from the report.

Saskatoon Children: Developmental Outcomes

The vast majority (89%) of Saskatoon children were in good health in 2005, although one in four had at least one long-term health condition, such as allergy, bronchitis, learning disability or epilepsy. Overall, Saskatoon children made significant progress in cognitive development between 2001 and 2005. Specifically, the average score on receptive vocabulary skills, as measured by the Peabody Picture Vocabulary Test – Revised, continued to match the national standard and was above the average across the UEY-II communities. About 16% of Saskatoon children were classified as delayed in vocabulary development, compared with 24% across the UEY-II communities. On the Who Am I? (pre-literacy skills) assessment, Saskatoon children scored slightly below the UEY-II average, with about 17% of children potentially at risk in cognitive development. On the Number Knowledge assessment, the performance of Saskatoon children was close to the UEY-II average, with 68% of children in 2005 reaching the 6-year-old equivalent level of number knowledge, compared with 58% in 2001. (The three assessment tools are described in Chapter 2.)

Saskatoon children also made substantial progress in emotional and behavioural development between 2001 and 2005. For example, the proportion of children with signs of emotional problems dropped by 28%, while the proportion exhibiting aggressive behaviours or indirectly aggressive behaviours fell more than 35%. The most significant progress was made in the proportion of children showing signs of hyperactivity, which dropped by 60%. As a result, the performance of Saskatoon children in emotional and behavioural development was comparable to the average level across the UEY-II communities.

Saskatoon Children: Demographic Characteristics

Between 2001 and 2005, the kindergarten population in Saskatoon underwent some demographic changes. The number of children enrolled in kindergarten programs increased by 62%, up from 1,370 in 2001 to 2,214 in 2005. Just over half of these children were boys, about 22% were born outside Canada, and roughly 17% were Aboriginal. More than 40% of children did not speak English or French as their first language.

² Each interview was conducted with the person deemed most knowledgeable about the child (PMK). About 85% of PMK were mothers.

Findings from this study show that vocabulary skills, social behaviours and attention spans were related to children's gender, birthplace and first languages, with the latter two factors being especially important in explaining differences in vocabulary development.

Saskatoon Families: Characteristics

The average household income in Saskatoon was higher than the average among the UEY-II communities. In addition, between 2001 and 2005, the average household income increased by almost \$3,000 (adjusted for inflation). However, the percentage of children living below Statistics Canada's low-income cut-off (LICO) rose slightly, from 20% to 22%.

The vast majority (over 90%) of Saskatoon children had healthy parents. Moreover, the percentage of parents reporting a chronic health condition fell considerably, from 37% in 2001 to 29% in 2005. The proportion of parents born outside North America and Europe grew significantly over the study period, from fewer than 50% to 54%. As elsewhere in Canada, more young children in Saskatoon had parents who had completed post-secondary education. Between 2001 and 2005, the percentage of parents with a university degree or college diploma increased by over 50%, from 38% to 58%. At the same time, the proportion who had not completed secondary education declined from 12% to 5%. Labour market participation by young children's parents in Saskatoon declined, with about 65% of those interviewed working outside the home in 2005, compared with 69% in 2001. About one in five Saskatoon children lived in no-earner families in 2005, an increase of 7% over 2001.

Changes also took place in the structure of young children's families in Saskatoon. More children lived in a two-parent family in 2005 than in 2001 (82% vs. 74%). As well, about 76% of children had one or more siblings in 2005, an increase of 12% over the 2001 figure (68%).

The study found that children living below LICO in Saskatoon were much more likely than other children to show delayed vocabulary development. Low income level was also strongly linked to low participation in supervised group activities, such as coached sports; music or art lessons; and dance, gym or martial arts classes. On the other hand, activities such as uncoached sports were not associated with income levels.

Children's outcomes were also related to mothers' birthplace, mothers' health, parental level of education and parental employment situation. Children with mothers born outside Canada, children with mothers in poor health, children with mothers who had not completed secondary school, and children from no-earner families were significantly more likely to show delayed vocabulary development, emotional problems and aggressive behaviours. The data also suggest that Saskatoon children living in single-parent families were more likely than those living in two-parent families to have delayed vocabulary scores and show aggressive behaviours.

Saskatoon Families: Family Processes

The majority of children's families functioned well, with the proportion of well-functioning families increasing between 2001 and 2005 (83% vs. 91%). The vast majority (over 85%) of Saskatoon parents were positive, consistent and effective in their interactions with their children. They were also actively engaged in providing a home filled with stimulating activities. Compared with parents across the UEY-II communities, Saskatoon parents were much more engaged in helping their young children learn, by reading to them frequently, telling them stories and encouraging them to use numbers.

The survey results indicate that a low level of family functioning was associated with delayed cognitive development, anti-social behaviours and hyperactivity on the part of children. The data also show that parenting, especially consistent parenting, was strongly related to better outcomes in cognitive, emotional and social behavioural development.

Saskatoon Childcare Arrangements

In Saskatoon, the proportion of children receiving non-parental childcare increased by 30% between 2001 and 2005, up from 47% to 61%. Of these children, just over half were cared for by a non-relative either at or outside the home. Relatives provided care for more than a quarter of children, with institutional care facilities providing service for another fifth.

Saskatoon Community: Neighbourhood Qualities

Parents in Saskatoon generally reported that they lived in good neighbourhoods, characterized by good schools and nursery schools, accessible public transport, a safe and clean environment, and a high proportion of families with young children. However, neighbourhood health facilities received relatively low scores. About a quarter of parents did not think that neighbours worked together to solve problems. As well, there was some evidence that scores for neighbourhood quality declined between 2005 and 2001. About 23% of parents in 2005 appeared to be concerned with safety when walking after dark, a 25% increase over 2001.

The findings of this study indicate that neighbourhood quality may have an impact on children's vocabulary skills, emotional development and attention span: children living in high-quality neighbourhoods were much less at risk in these aspects of development than other children. Evidence from 2005 also shows that neighbourhood social support may be important in explaining differences among Saskatoon children's social behaviours as well as vocabulary development.

Saskatoon Community: Resources for Young Children

Compared with averages across the UEY-II communities, Saskatoon children had better access to local educational and cultural resources, although the level of access to the latter declined slightly between 2001 and 2005. The accessibility of local recreational resources was also down, from 57% to 54% – below the UEY-II average.

Fewer than 10% of children used educational resources such as book clubs or reading programs on a weekly basis. Up to 70% of children did not use these resources at all throughout the year. Participation in cultural activities – such as art museums, plays, musical performances, spectator sports events and movie going – was much higher: up to 90% of children participated in those activities, although most did so only a few times a year. Recreational facilities registered the highest use among the three types of community resources. For example, over 73% of children used parks or play spaces at least weekly in 2005, an increase of about 10% compared with 2001.

Saskatoon children had higher participation in most kinds of group activities than the average across the UEY-II communities. For example, in 2005, over half of Saskatoon children participated in organized sports on a weekly basis, while weekly participation in unorganized sports was as high as 69%. These participation rates were all better than in 2001.

Many parents reported difficulties accessing community programs or services. The three most common reasons, in both 2001 and 2005, were “not enough time,” “programs [available only] for older children” and “program times not convenient.” Other major barriers mentioned by interviewees included program costs, lack of awareness of available programs, unavailability of programs of interest and difficulty getting to the facilities. It is also noteworthy that fewer parents in 2005 than in 2001 reported access barriers, but the change was slight.

1. Introduction

The nurturing and stimulation that children receive during their first 5 years can affect the rest of their lives. Research shows that neighbourhoods and communities have a major impact on the quality of this nurturing and stimulation, influencing the ability of parents and schools to provide the conditions that will result in the best developmental outcomes for children.

Understanding the Early Years (UEY) is a national initiative that (a) gathers information about the influence of family, neighbourhood and community factors on children's early development and (b) provides this information to families and community organizations so that they can use it in monitoring children's development and creating effective community-based responses. The goal is to help families and their communities make informed decisions about the best and most appropriate policies, programs and services for young children.

The pilot phase of the UEY initiative (UEY-I) was launched with a study in York region (now the North Quadrant of Toronto, Ontario) in 1999. Then, in 2000–2001, five communities – Prince Albert, Saskatchewan; Winnipeg (School District No. 1), Manitoba; Prince Edward Island; and Southwest Newfoundland – joined UEY-I. UEY-I was followed by a second pilot phase (UEY-II), when another seven communities became pilot sites in 2001–2002: Hampton/Sussex, New Brunswick; Montréal, Quebec; Dixie Bloor (Mississauga), Ontario; Niagara Falls, Ontario; South Eastman, Manitoba; Saskatoon, Saskatchewan; and Abbotsford, British Columbia.

This report presents results from the Saskatoon pilot site. The findings – based on data collected by Statistics Canada in 2001 and 2005 using the Communities Survey – focus on the outcomes of Saskatoon kindergarten children in major domains of child development, including physical health and well-being, cognitive skills and behaviour. The report also explores factors that may have influenced developmental outcomes, by looking at changes that took place between 2001 and 2005 in demographic characteristics, family processes and community factors.

The remainder of this chapter offers brief descriptions of Saskatoon as a milieu for the development of young children, the local UEY project sponsor and participants, and research activities implemented in the community as part of the overall UEY initiative.

1.1 Saskatoon Community

Centrally located in Saskatchewan, Saskatoon is known as the hub city of the Prairies because of its proximity to Calgary, Edmonton, Regina and Winnipeg. It is a culturally alive and vibrant community, as well as the commercial and educational centre of the province. The city has a population of approximately 210,000 and covers an area of 144 km². There are 83 neighbourhoods, 56 of which are residential, with others being industrial, commercial or undeveloped. In 2001, 14,145 children aged 0 to 4 years were living in Saskatoon, many of them (18%) Aboriginal. Research and education are key to the city's economy (Saskatoon is home to the University of Saskatchewan), while other activities include agriculture-related industries, mining, forestry, oil and gas, and manufacturing.

Saskatoon neighbourhoods are characterized by caring residents, and local community organizations work in partnership with residents of core neighbourhoods to tackle issues such as housing, poverty, childcare and access to social programs. Despite this, Saskatoon faces a number of challenges related to healthy child development, including high percentages of working poor, low levels of education and low levels of employment in certain areas. Saskatoon also has a high proportion of single-parent families, especially in its west-side neighbourhoods.

1.2 Understanding the Early Years Pilot Project in Saskatoon

As noted above, Saskatoon became a UEY community in 2001. The UEY project here is sponsored by Saskatoon Communities for Children (C4C), a government–community collaboration dedicated to improving the lives of children, youth and families by encouraging partnerships, promoting the use of research, developing resources and tools, and emphasizing the importance of outcomes and results. In concert with the United Way of Saskatoon, C4C coordinates the work of SuccessBy6@ Saskatoon, the city's early years advisory and community working group. SuccessBy6@ Saskatoon is a multi-sectoral coalition of individuals

and community groups with an interest in early childhood development. Through its working group meetings, the coalition provides opportunities for participants to learn, share information and network.

Research related to the UEY project in Saskatoon consisted of the following activities:

Teacher Assessment of Children's Readiness to Learn at School – Kindergarten teachers in Saskatoon used the Early Development Instrument (EDI) questionnaire, developed by McMaster University, to assess their pupils' readiness to learn prior to Grade 1. The instrument measures the five domains of readiness to learn: physical health and well-being, social competence, emotional maturity, language and cognitive development, communications skills and general knowledge. All children in their second year of kindergarten in Saskatoon elementary schools were assessed, and the results served as an indicator of how Saskatoon children were supported and prepared during the preschool years for learning and entry into school.

Communities Survey – Statistics Canada conducted this survey to gather information on a representative sample of second-year kindergarten children in Saskatoon elementary schools. Data were collected through interviews with the person most knowledgeable about the child, usually a parent or guardian, and three direct assessment activities with the child. The results were analyzed to determine any relationships between children's development and various family and community factors that could influence that development. (For more information, see Chapter 2.)

Community Mapping Study – This study, carried out by the Saskatoon community itself, consisted of the following three components: (1) an analysis of census data on distributions of children aged 0 to 6 years in relation to the socio-economic characteristics of the community (e.g., cultural, ethnic and linguistic diversity; household income; parents' employment and level of education; and level of criminal activity in the community); (2) development of an inventory of local programs and services available for families with young children; and (3) a study to examine in detail the infrastructure and physical environment, risk factors and assets of the neighbourhoods of Saskatoon. The results of this study were mapped to illustrate how community and socio-economic resources, as well as other factors, are linked to children's development.

The EDI and Communities Survey entailed two cycles of data collection, the first on the 2001 cohort of kindergarten children and the second on the 2005 cohort. Both cycles of data collection had the same objectives. However, the fact there were two cycles enabled researchers to assess any changes in children's readiness to learn and how these might have been influenced by changes in the community's characteristics (including demographic and family characteristics) between 2001 and 2005.

The UEY project has helped Saskatoon improve community collaboration and consultation through a strong community–research partnership. Local research information has been used by the community and disseminated through numerous research reports, community maps, fact sheets and presentations. In particular, Saskatoon Public Schools has based two major initiatives on UEY research data: the Literacy for Life reading program and a full-time, everyday kindergarten pilot program. As well, a Provincial Early Years Think Tank has been formed and an Integrated Early Child Care Program is being developed. More information regarding the Saskatoon UEY project is available from the Saskatchewan Population Health and Evaluation Research Unit at www.spheru.ca.

2. Background to the Communities Survey

This chapter presents a summary of theories on early childhood development and offers a brief description of the Communities Survey and its implementation in Saskatoon. Its purpose is to provide background that can help in understanding what the study is about as well as the analysis of data reported in the following chapters.

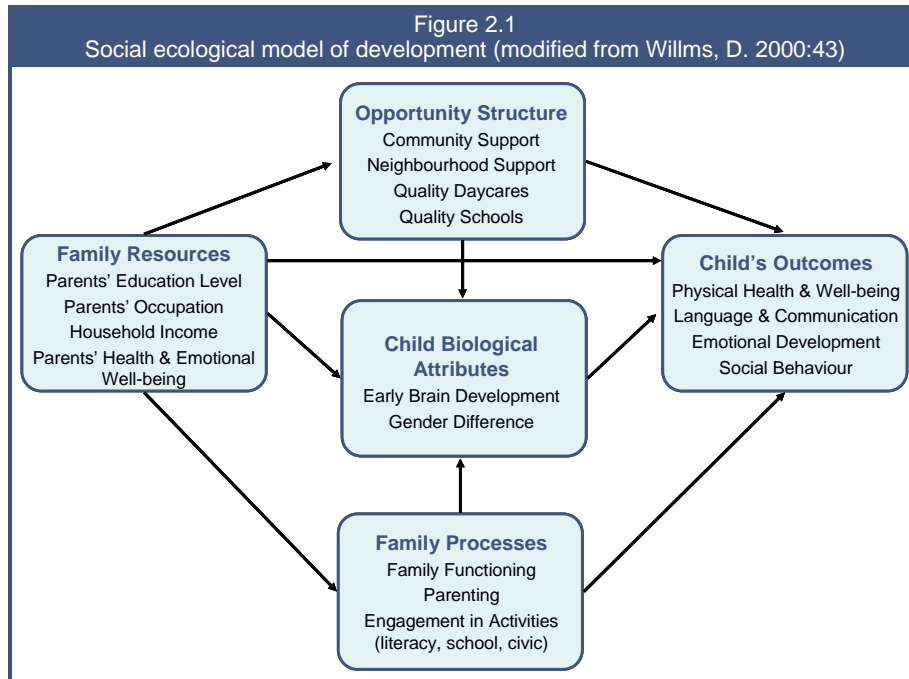
2.1 Early Childhood Development: Main Theoretical Perspectives

Research on early childhood development has been influenced primarily by three theoretical approaches (Willms 2002). The first approach is represented by “investment theory,” an economic theory that presumes that children receive an endowment from their parents. This endowment includes biological attributes as well as their parents’ norms, values, preferences, wealth and access to resources. Parents invest time and money in their children, mainly through expenditures on education and health care. Many studies of childhood outcomes are based on this theory.

The second set of theories suggests that childhood outcomes result from family processes and parenting practices. Children are less likely to have behavioural problems or poor cognitive development when their parents are supportive, responsive and affectionate. On the other hand, child development is negatively affected when parents are less engaged in activities beneficial to emotional and intellectual development, or are experiencing marital breakdown, as well as when families function less well as a cohesive unit.

The third group of theories stresses the importance of social context in shaping, constraining and redirecting the actions of individuals (Coleman 1988). This set of theories has sparked a number of recent research projects linking child health and development to community and neighbourhood characteristics. According to this perspective, parents’ choices are influenced by the norms of their immediate community and the social supports available to them. For example, the amount of time parents spend with their children is shaped by the culture of the neighbourhood, friendship networks and the types of support provided in the community. Parents’ ability to provide a nurturing environment for their children can be either helped or hindered by the neighbourhood and wider community (Willms 2003). For example, the quality and safety of the neighbourhood and of its daycare centres and schools, as well as other social factors such as a strong network of supportive friends and colleagues, play an important role in a child’s development.

Theories that emphasize the roles of parenting, family functioning, neighbourhood and community have provided insights into the links between family socio-economic resources and children’s developmental outcomes. More important, these theories have shed light on the changes that are possible through the actions of families, the support of community and volunteer agencies, and informed social policy at the local, provincial and national levels (Willms 2003).



However, many studies on childhood development (summarized in Appendix A) indicate that all the factors identified in these theories play a role in a child's developmental outcomes. Thus, a new approach has emerged – the social ecological model of development – that views childhood development as the product of a combination of factors: individual characteristics, the family, the neighbourhood and the larger community (see Figure 2.1). This approach has gained broad acceptance in recent years. Under it, no single factor is predominant in determining a child's developmental outcomes. Rather, all factors interact in complex ways to influence outcomes.

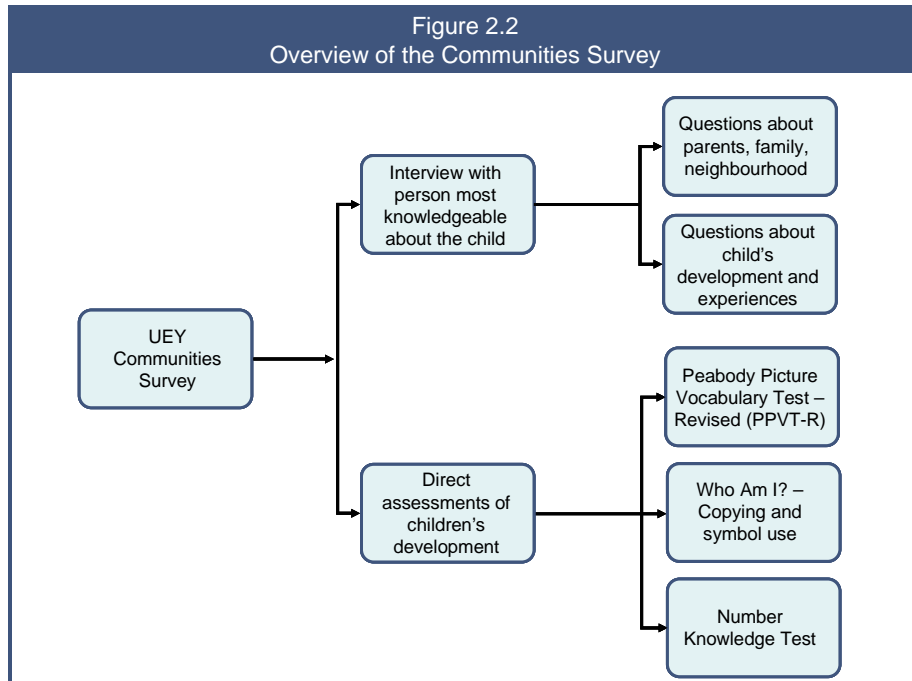
According to this model, studies of developmental outcomes need to include many individual, family and community factors in order to understand how these factors combine to affect a child's development. Research under the Understanding the Early Years (UEY) initiative, particularly the Communities Survey, has been heavily influenced by this social ecological thinking. The basic concepts have guided not only what types of data were collected at the UEY pilot sites but also how the data were analyzed.

2.2 Development and Content of the Communities Survey

The Communities Survey was developed by Human Resources and Social Development Canada and Statistics Canada for the UEY initiative. To ensure that the survey adequately addressed all relevant factors affecting early childhood development, the design phase included a multidisciplinary consultation. The selection of specific priorities and survey questions was then carried out with input and advice from the expert advisory group of the National Longitudinal Survey of Children and Youth (NLSCY), a group consisting of researchers in childhood development and other social sciences, representatives from other federal departments, and representatives from the provinces and territories responsible for childhood development programs.

The Communities Survey takes an ecological or holistic approach to understanding early childhood development and is designed to capture the diversity and dynamics of the factors that may affect children's development. Thus, it measures a set of developmental outcomes for children at 5 years of age, before they enter Grade 1, including those related to physical health, cognitive skills, emotional development and social behaviours. At the same time, it collects information on a broad range of factors that can explain these outcomes. This includes information about the child, the child's parent(s), family and neighbourhood characteristics, and the child's family life and community activity experiences. The Communities Survey employs the instruments used in the NLSCY for the cohort of 5-year-old children, enhanced with

supplementary questions on childcare arrangements and use of community resources. Figure 2.2 provides an overview of the instruments used in the Communities Survey.



The Communities Survey consists of two parts: an interview with the person most knowledgeable about the child (PMK), usually the child’s mother, and direct assessment activities with the participating child. The principal instrument used for interviews with the PMK is a questionnaire that contains two sections: a Child Section, where the PMK answers questions about the child; and an Adult Section, where the PMK provides information about the PMK and PMK’s spouse or partner (where applicable), family structure and neighbourhood. The topics and topic contents are summarized in Table 2.1.

**Table 2.1
Topics and topic contents in the PMK questionnaire**

Child Section	
Topics	Content
Health	General health, injuries, limitations, chronic conditions, use of health services
Behaviour	Positive behaviours such as perseverance and independence as well as negative ones such as hyperactivity and physical aggression
Activities	Participation in non-school activities and interaction with peers
Literacy	Exposure to books and interest in participating in reading and learning activities with parents
Parenting	Methods parents use to control, discipline, encourage and respond to the needs of the child
Family history	Child's family arrangements (e.g., parents' marital status and, if parents are separated/divorced, age of the child at the time)
Childcare	Types of childcare and amount of time spent in childcare
Communication	Ability to understand an oral message and to pass the content on to someone else, as well as the general ability to communicate verbally
Community resources	Availability and use of educational and recreational resources in the community (e.g., museums, community centres) and reasons for not using these resources where available (e.g., inaccessibility or cost)
Socio-demographic characteristics	Ethnicity, country of origin, Aboriginal status, first languages, languages used at home
Adult Section	
Health	General health, physical limitations, chronic conditions, mental health (e.g., depression syndrome)
Education	Highest level of education attained
Income	Household income, sources of income, adequacy of income
Labour market participation	Employment status, occupation, industrial sector, work hours and shifts; if applicable, length of unemployment and reasons for unemployment
Family functioning	Quality of family relationships as indicated by the family's ability to communicate, make decisions and solve problems as a group, discuss feelings and concerns, and feel accepted for who they are
Neighbourhood safety	Perception of the neighbourhood as a safe or dangerous place to raise children, perception of social cohesion or neighbourliness
Social support	Support from friends, family members and members of the community
Socio-demographic characteristics	Immigration, ethnic background, languages spoken by household members, religious affiliation

The second component of the Communities Survey includes three assessment activities that are undertaken with each participating child:

- the Peabody Picture Vocabulary Test – Revised (PPVT-R); French-speaking children received the French equivalent of the PPVT-R, the Échelle de vocabulaire en images Peabody, version révisée (EVIP-R);
- a shortened version of the Who Am I? instrument; and
- the Number Knowledge Test.

These assessment activities are summarized below.

Peabody Picture Vocabulary Test – Revised

The PPVT-R is used to assess a child's level of receptive (or hearing) vocabulary, which can predict achievement in school. During the assessment, the child is given a card bearing four images. The assessor then reads out a word from the test, and the child has to point to the image on the card that the child believes represents that word. Pictures and words become progressively more difficult as the test continues. The PPVT-R was developed by Lloyd and Leota Dunn at the University of Hawaii and is widely used as a measure of receptive vocabulary for any age group (2.5 years to adult).

Who Am I?

The Who Am I? instrument is administered to children upon entry into school. It assesses the cognitive processes that underlie the acquisition of early literacy and numeracy skills. The assessment consists of three scales: symbols (circle, cross, square, triangle and diamond), copying (printing name, letters, numbers, words and sentences) and drawing (a picture of self). However, because of time constraints, the drawing task was removed from the Communities Survey. The child is given a booklet containing various tasks. The child completes as many tasks as he or she can while the assessor turns the pages and gives instructions. The instrument was developed by Molly de Lemos and colleagues at the Australian Council for Educational Research and can be used with children from 3 to 7 years of age.

Number Knowledge Test

This test assesses a child's understanding of the concept of quantity and the system of whole numbers. Children are asked to demonstrate their understanding of quantity (more vs. less), their ability to count objects, their understanding of number sequence and their ability to do simple arithmetic. Children who start school with this intuitive knowledge generally do well in math. Children who do not have this understanding, or who are working in a language that is not their mother tongue, often have difficulty mastering basic arithmetic and demonstrating number sense. The assessment was developed by Robbie Case at the Ontario Institute for Studies in Education, University of Toronto. It can be used with children from about 3.5 to 10.5 years of age. Dr. Case and his colleague Yukari Okamoto at the University of California developed a shortened version of this assessment for the National Longitudinal Survey of Children and Youth. The test is administered orally, and the questions are asked until the child fails to correctly answer more than half the problems in a level.

2.3 How the Communities Survey Was Conducted in Saskatoon

As in other UEY-II pilot communities, two cycles of Communities Survey data collection took place, with the first cycle in 2001 and the second in 2005. Both data collection cycles were completed using a sample of children who were of kindergarten age at the time, and both followed similar procedures. The data collection process used in 2005 is described below as an illustration.

The target population comprised all children enrolled in the second year of kindergarten at Saskatoon schools in the fall of 2004 and who were still attending a school within the community in the winter of 2005 (during the household data collection period). This population was used to select a representative sample of children (and their parents) to participate in the survey. The sample size in 2005 was 436, representing 2,214 kindergarteners (the sample size in 2001 was 425, representing a kindergarten population of 1,370).

The survey was administered between February and June 2005. Household data were collected in February, March and April by Statistics Canada staff who contacted the parents and conducted interviews by telephone. At the time of the telephone interview, the initial household contact was asked to identify who in the household was the person most knowledgeable about the child. The PMK provided information about the selected child as well as socio-demographic information about the PMK and his or her spouse/partner, if applicable.

The vast majority of PMK were the children's mothers, as shown in the following breakdown of the relationship between PMK and children (averages across the seven UEY-II pilot communities in 2005):³

- For 87.9% of the children, the PMK was the mother (86.0% the biological mother and 1.9% the stepmother, adoptive mother or foster mother).
- For 10.8% of the children, the PMK was the father (10.5% the biological father and 0.3% the stepfather, adoptive father or foster father).
- For 1.3% of the children, the PMK was not their parent.

In May and June, Statistics Canada interviewers went into the schools to administer the direct assessment portion of the survey to children whose parents had provided written or verbal consent. Children who were not able to communicate in English or French were not assessed.

³ Special Surveys Division, Statistics Canada, 2005, *Communities Survey, 2005- User's Guide*. (http://www.statcan.ca/english/sdds/document/5067_D2_T1_V2_E.pdf)

3. Developmental Outcomes of Saskatoon Young Children – Findings from the Communities Survey

This chapter discusses the developmental outcomes of Saskatoon kindergarten children, focusing on their physical health, cognitive skills, and emotional and behavioural development. The findings are based on data collected from representative samples of children and persons most knowledgeable about the children (PMK) who participated in the Communities Survey in 2001 and 2005. The children underwent three direct assessments designed to evaluate their cognitive skills, while PMK (mostly mothers) were interviewed for their opinions on their children’s health, emotional development and behaviour. Data collection was carried out by Statistics Canada. Where appropriate, results for Saskatoon are compared with averages across the seven communities participating in the second phase of the Understanding the Early Years (UEY-II) initiative.

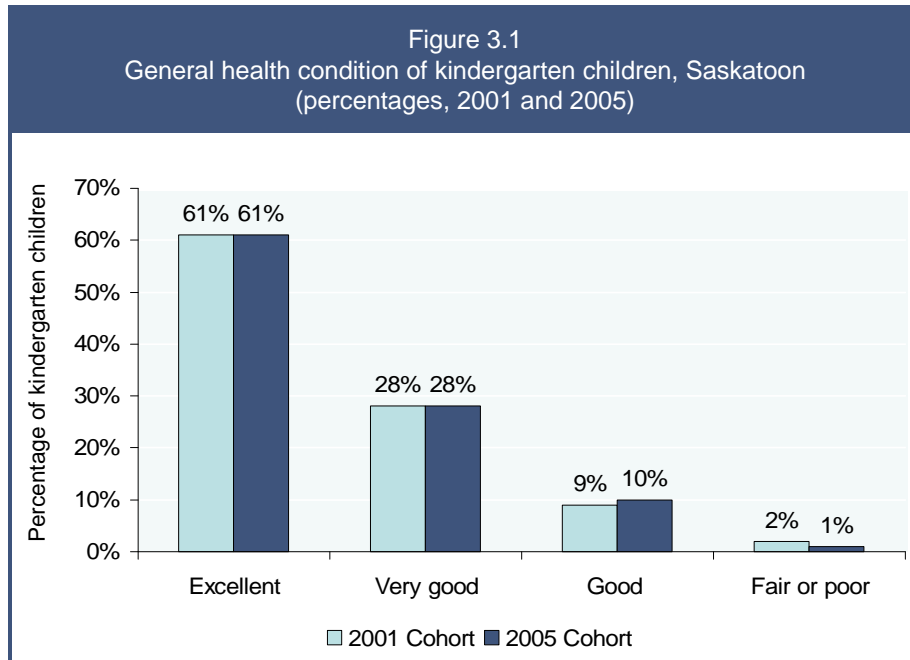
Taken together, the data on these 5-year-old children provide valuable information about their abilities, attitudes and behaviours as they begin formal schooling. These attributes are important influences in early scholastic achievement. More significantly, by reflecting how children in Saskatoon have been faring and how they are supported in their early years, the data provide important insights for the Saskatoon community – parents, caregivers, educators, service providers and others – that can help in developing better programs and services to meet the needs of the community’s children.

3.1 Physical Health

Table 3.1 displays the mean values of three common measures of physical development – height, weight and birth weight of children, estimated by PMK during the interviews. The table also shows the percentage of children who suffered from a long-term health condition, such as allergy, bronchitis, mental handicap or epilepsy, as reported by PMK. The average values of these measures for the combined data of the seven UEY-II communities are also provided for comparative purposes.

Table 3.1				
Average height, weight and birth weight, and presence of chronic conditions among kindergarten children, Saskatoon and UEY-II communities (2001 and 2005)				
	Saskatoon		UEY-II communities	
	2001	2005	2001	2005
Height (mean, cm)	109.4	110.0	110.6	110.0
Weight (mean, kg)	21.1	20.8	21.1	21.1
Birth weight (mean, kg)	3.4	3.5	3.4	3.4
Presence of chronic condition (%)	24.0	25.9	21.9	23.7

During the interviews, PMK were also asked to rate the general physical health of their children as “excellent,” “very good,” “good,” “fair” or “poor.” The results from both the 2001 and 2005 cycles of data collection are presented in Figure 3.1.



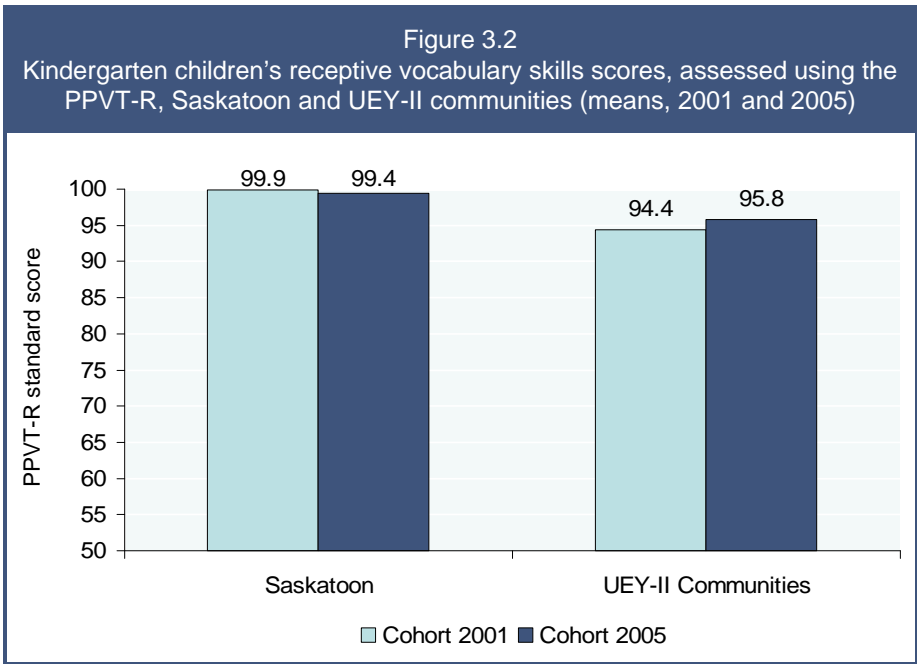
The results indicate that in both 2001 and 2005, about one in four kindergarteners in Saskatoon suffered from at least one long-term health condition (see Table 3.1). However, the vast majority (89%) of PMK – in both surveys – rated their children’s general health as excellent or very good. Fewer than 2% of PMK ranked their children’s health as being merely fair or poor (see Figure 3.1).

3.2 Cognitive Outcomes

As noted in Chapter 2, the Communities Survey uses three direct assessments to assess kindergarteners’ cognitive skills: the Peabody Picture Vocabulary Test – Revised (PPVT-R), Who Am I? and the Number Knowledge Test.

3.2.1 Peabody Picture Vocabulary Test – Revised

The PPVT-R assesses children’s level of receptive (or hearing) vocabulary in English (a French version is available to assess the level in that language). The standardized scores on this test range from 40 to 160, with 100 being the national average – a norm based on results from the National Longitudinal Survey of Children and Youth (NLSCY). Figure 3.2 shows that the average score of Saskatoon kindergarteners on receptive vocabulary was about 99.4 in 2005. This score is identical to the 2001 average, as well as significantly higher than the average of the UHEY-II communities (95.8) and on par with the national level (100).



Means, however, may only represent how well an average child performs or most children perform on a test. Some children may perform extremely well, while some may perform much worse. To identify the proportion of children who are potentially at risk in this developmental domain, we separated them into three groups based on their PPVT-R scores. Thus, we classified children who received a standard PPVT-R score below 85 as being “delayed” in vocabulary development, children with scores higher than 115 as being “advanced” and children scoring between 85 and 115 as being “average.”

Classification of PPVT-R Scores

The classification of PPVT-R scores is based on the National Longitudinal Survey of Children and Youth (NLSCY) results, which indicate that about 70% of 5-year-old Canadian children score between 85 and 115 (i.e., within one standard deviation of the national average, with the standard deviation being 15), 15% of children score below 85 and the other 15% score higher than 115 (this assumes the distribution of PPVT-R scores for the NLSCY national sample is a normal distribution). If a Saskatoon child scored under 85 on the PPVT-R, that child was deemed weaker in English or French vocabulary skills than the majority (85%) of Canadian children of the same age.

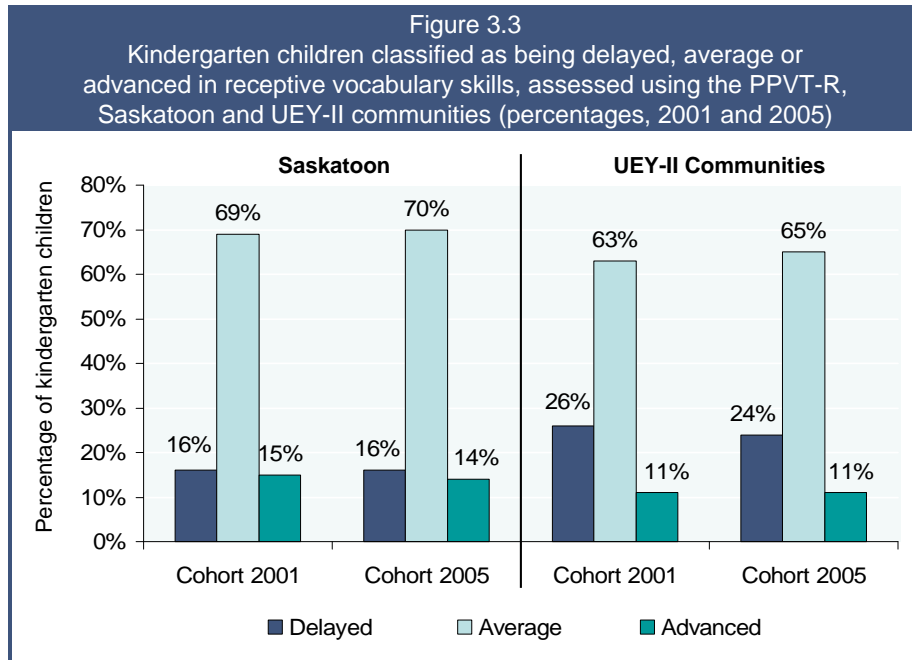


Figure 3.3 presents the results based on this classification of children’s vocabulary development. It shows that in 2005, about 84% of Saskatoon children were at or above the level of average, identical to the percentage recorded in the 2001 study. This result was considerably better than the average (76%) across the UEY-II communities. In addition, about 16% of Saskatoon kindergarteners were delayed in vocabulary development, a proportion considerably lower than the average across the UEY communities (24% in 2005).

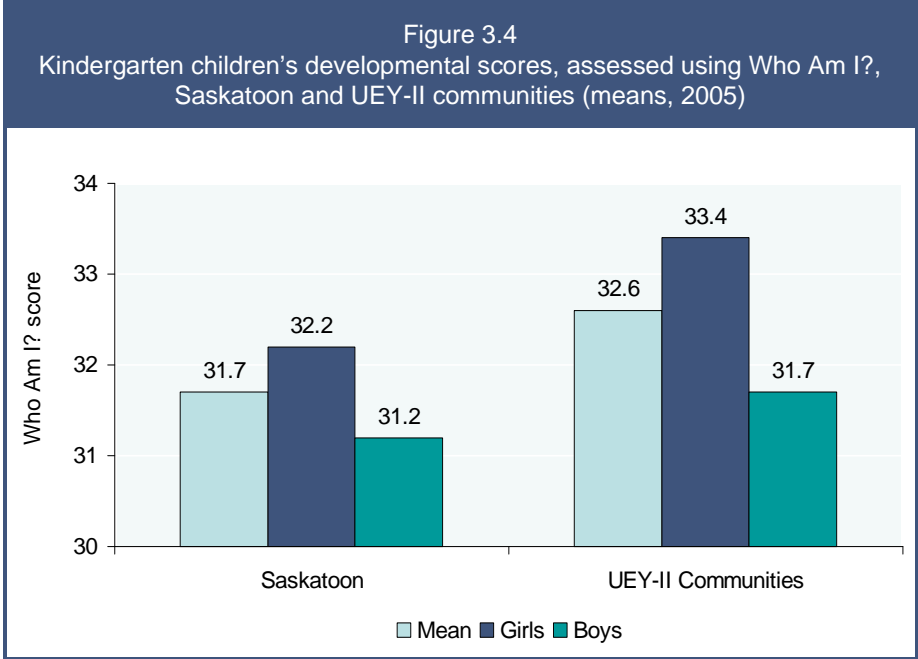
3.2.2 Who Am I?

Who Am I? is a developmental assessment designed to assess children’s ability to conceptualize and reconstruct a geometric shape, and to understand and use conventional symbols, such as numbers, letters and words. Because the tasks are not particularly language-dependent, the Who Am I? tool can be used to assess the development of children whose knowledge of English or French is limited.

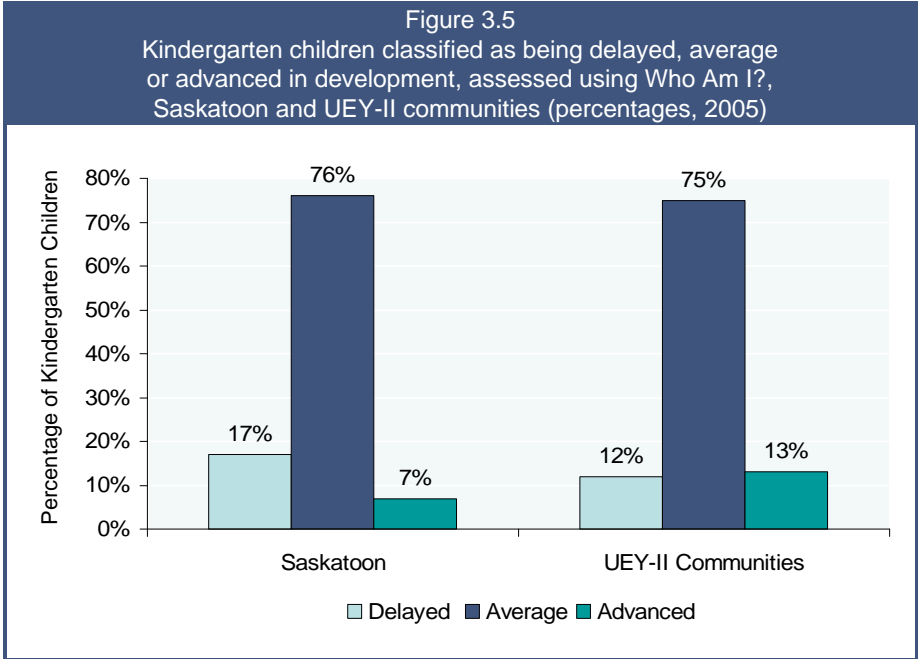
The scores used to measure children’s performance on the Who Am I? assessment range from 10 to 40. As Figure 3.4 shows, the average score of Saskatoon children in 2005 was 31.7 out of 40, a score slightly below the UEY-II average.

Classification of Who Am I? Scores

Findings from the 2005 data collection cycle of the Communities Survey indicate that the average score for children across the UEY-II communities was 32.6, with a standard deviation of 3.9. This implies that, if the scores were distributed normally, about 70% of kindergarteners in the UEY-II communities would be expected to score between 28.7 and 36.5. We thus classified children who scored below 28.7 as being “delayed” in copying skills and symbol use, and children who scored above 36.5 as being “advanced.” If a Saskatoon child scored below 28.7, that child was deemed weaker in copying skills and symbol use than the majority (85%) of UEY-II children. (Note: Due to the large number of missing values in the Who Am I? results from 2001, only the results from 2005 are discussed in this report.)



To identify the proportion of Saskatoon children performing less well than the majority of children in the UEY-II communities, we established a threshold based on the mean score of the UEY-II communities. The results, presented in Figure 3.5, indicate that 7.4% of Saskatoon children were at the advanced level in copying skills and symbol use, while 17.2% were delayed, based on the UEY-II norm. In addition, Saskatoon had a lower percentage of children at the advanced level than the UEY-II average and a higher percentage at the delayed level.



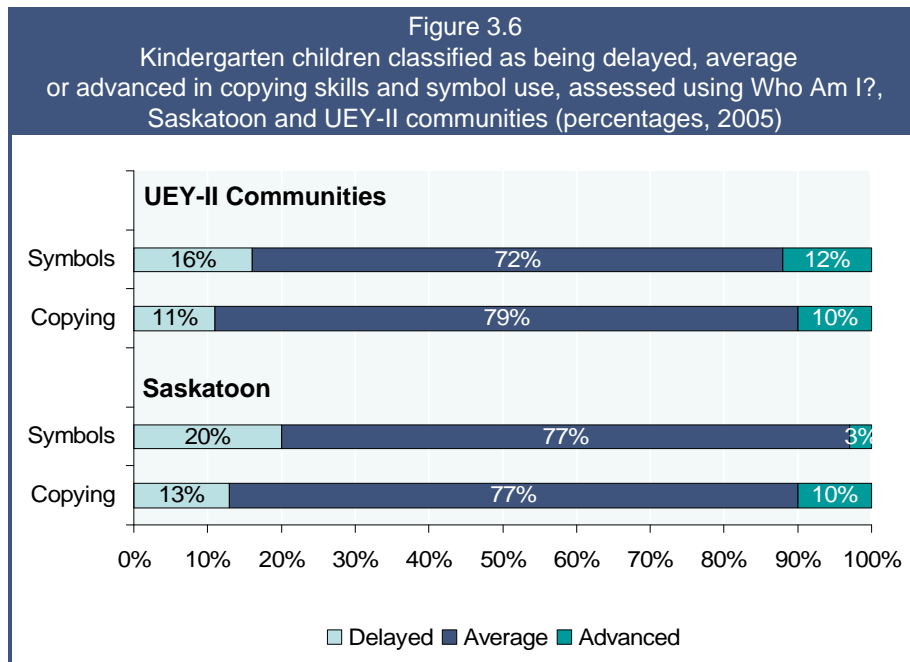


Figure 3.6 provides a further look at the two components of the Who Am I? assessment: copying skills and symbol use. The results indicate that Saskatoon children were slightly stronger in copying skills than in symbol use, with 10% of them in the advanced category in copying skills versus 3% in the advanced category in symbol use. Saskatoon children were close to the UEY-II norm in copying skills, with similar percentages of children distributed in the delayed, average and advanced categories. Their level of symbol use, however, appeared to be below the average across the UEY-II communities: only 3% of Saskatoon children placed in the advanced category, with 20% in the delayed category. The corresponding percentages for the whole UEY-II sample were 12% and 16% respectively.

3.2.3 Number Knowledge Test

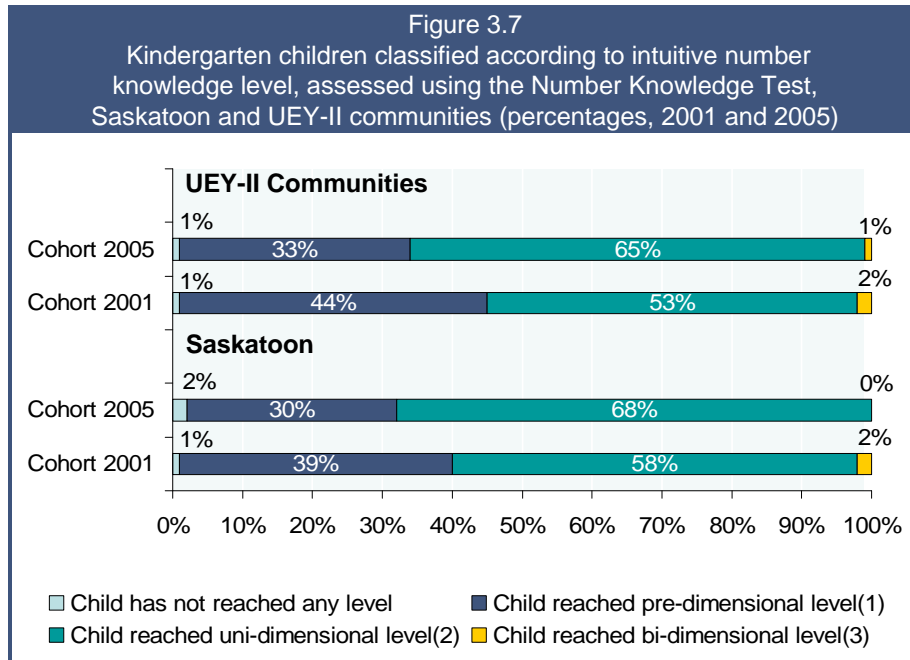
The Number Knowledge Test assesses children’s understanding of the numbering system, which is the basis of addition and subtraction. During the test, children are asked to demonstrate their understanding of quantity (more vs. less), ability to count objects, understanding of number sequence, and ability to do simple arithmetic.

Three Levels of Number Knowledge

The Number Knowledge Test contains questions grouped into three developmental levels. Each level provides the conceptual building block for knowledge at the next level. The three levels are:

- pre-dimensional (level 1) – indicates the child has reached the 4-year-old equivalent of number knowledge;
- uni-dimensional (level 2) – indicates the child has reached the 6-year-old equivalent; and
- bi-dimensional (level 3) indicates the child has reached the 8-year-old equivalent.

Results from 2005 (see Figure 3.7) show that only about 2% of Saskatoon children who participated in the Number Knowledge Test failed to reach level 1 (the 4-year-old equivalent). The majority of children (98%) reached either level 1 (30%) or level 2 (68%) (the 6-year-old equivalent). These results were significantly better than those from 2001, when 39% of children reached level 1 and only 58% achieved level 2. The Number Knowledge Test results for Saskatoon were virtually identical to the averages recorded across the UEY-II communities in 2005.



3.3 Emotional and Behavioural Outcomes

As part of the Communities Survey, PMK were asked to provide information on their children's social, emotional and behavioural development. The questions, designed to discover the extent to which children exhibit various signs of developmental problems, were organized according to four behavioural measures:

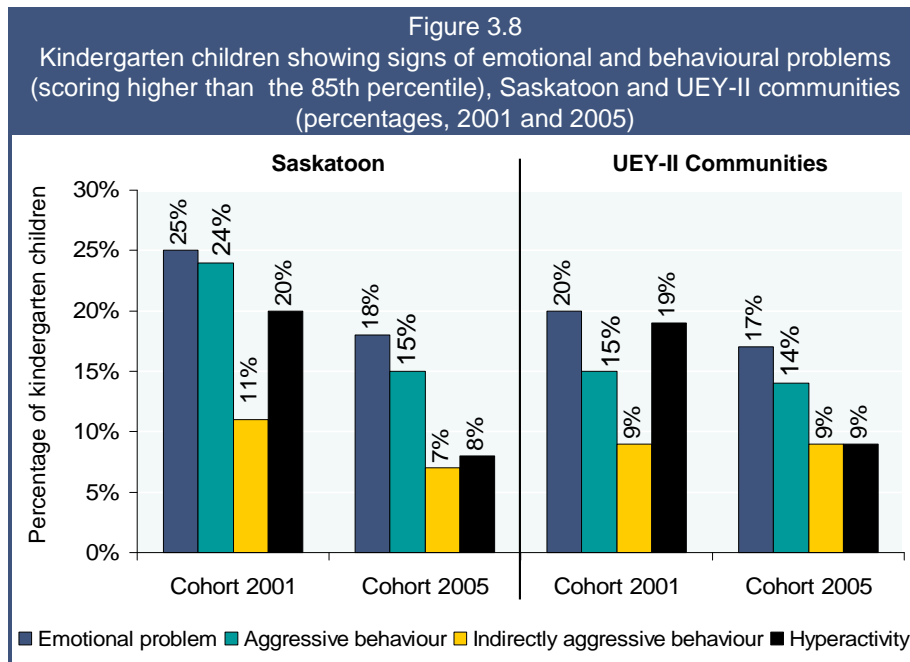
Anxiety/emotional problems: assesses the degree to which children seem unhappy or depressed; tend to be solitary; are nervous, high strung or tense; or have trouble enjoying themselves.

Physical aggression/conduct disorder: assesses the degree to which children are physically aggressive toward other people (including by kicking, biting or hitting). It also reflects behaviours related to threatening, bullying and cruelty to other children.

Indirect aggression: assesses the degree to which children who are angry with someone will try to make others dislike that person; become friends with someone else to take revenge on the person; say negative things about people behind their backs; or tell secrets to a third person.

Hyperactivity/inattention: assesses the degree to which children are restless or fidgety; cannot concentrate or pay attention for long; are impulsive; have difficulty waiting their turn; or cannot settle down to any task for more than a few moments.

For each of these four measures, the higher the score, the more the child exhibits behaviours consistent with those identified in the measure. For the purposes of this study, we designated scores equal to or greater than the 85th percentile score of the whole UEY-II sample as representing signs of behavioural problems. Thus, if a child's aggression score was equal to or greater than the 85th percentile score, the child was deemed to be more aggressive than 85 out of 100 children who were assessed on this indicator of behaviour.



The results shown in Figure 3.8 indicate a significant decline, between 2001 and 2005, in the proportion of children with developmental difficulties in Saskatoon. The proportion of children with signs of emotional problems dropped from 25% to 18%; the proportion exhibiting aggressive behaviours declined from 24% to 15%; the proportion displaying indirectly aggressive behaviours fell from 11% to 7%; and the proportion with hyperactivity sank from 20% to 8%. As a result, the performance of Saskatoon children in the emotional development and behavioural domains was comparable to the average across the UEY-II communities.

3.4 Summary

Overall, results from the Communities Survey indicate that the vast majority (89%) of Saskatoon children continued to enjoy good health in 2005, although one in four had at least one long-term health condition, such as allergy, bronchitis, mental handicap or epilepsy.

There was also evidence that Saskatoon children, as a whole, had made significant progress in the cognitive developmental domain between 2001 and 2005. Specifically, the average score on receptive vocabulary skills, as measured by the PPVT-R, showed stable performance between 2001 and 2005 (99.9 vs. 99.4). This indicates that children in Saskatoon continued to perform above the average level across the UEY-II communities (95.8) and at the level of the national average. It is noteworthy that about 16% of Saskatoon children were classified as delayed in vocabulary development. The corresponding result across the UEY-II communities was higher, at 24%.

In the Who Am I? assessment, the average score of Saskatoon was slightly below the average of the UEY-II communities, with about 7% of children classified as being in the “advanced” skills category in 2005. The corresponding proportion of children in the whole UEY-II sample was 13%. On the other hand, the Who Am I? results indicate that about 17% of children were potentially at risk in the domain of cognitive development.

In the Number Knowledge assessment, the performance of Saskatoon children was close to the average performance of children across the UEY-II communities. Within the community, a considerably higher proportion of children in 2005 than in 2001 reached the 6-year-old equivalent level of number knowledge (68% vs. 58%).

In the emotional and behavioural domains, Saskatoon children made substantial progress between 2001 and 2005 on all four measures analyzed in this chapter. The prevalence of children experiencing developmental difficulties dropped significantly over this period: the proportion of those with signs of emotional problems dropped by 28%, while the proportion of those exhibiting aggressive or indirectly

aggressive behaviours was down by more than 35%. The most substantial decline occurred in the proportion of hyperactive children, which fell by 60% between 2001 and 2005. As a result, the performance of Saskatoon children in the emotional and behavioural domains was comparable to the average level of the UEY-II communities.

As briefly discussed in Chapter 2, an extensive literature on early childhood development indicates that young children's development is related to a wide range of demographic factors, family resources, parenting practices, and physical and socio-economic environments. These include the gender of the child, income level of the child's household, parents' education level and employment situation, and family structure. In addition, children's experiences in the home and community, such as the relationships with parents, literacy activities in the home, and opportunities to participate in group activities in the community, have been linked to early developmental outcomes. In the following chapter, we present more data from the Communities Survey and discuss the various factors that may have affected the development of children living in Saskatoon.

4. Saskatoon Young Children, Their Families and the Community

In this chapter, we draw on results from the 2001 and 2005 data collection cycles of the Communities Survey to discuss how various factors may have changed for kindergarten children during that period and to explore how the changes may have affected these children.

The information presented is based on analysis of interviews with the persons most knowledgeable about the children (PMK) that were conducted by Statistics Canada as part of the Communities Survey. PMK (the majority of whom were the children's mothers) provided valuable information that could help the Saskatoon community better understand the needs and experiences of its children.

4.1 Children: Demographic Characteristics and Developmental Outcomes

4.1.1 Gender, birthplace and first language(s) of kindergarten children

As part of the Communities Survey, information was collected on the major demographic characteristics of Saskatoon children, including gender, birthplace and first language(s) learned at home. Research shows that these major demographic variables are often related to children's developmental outcomes.

As shown in Table 4.1, in 2001, just over half of Saskatoon kindergarteners were boys, about 16% were born outside Canada and about 18% were Aboriginal. Two thirds spoke English as their first language, while the rest spoke languages other than English or French as their mother tongue. This group included children born in non-English-speaking or non-French-speaking countries as well as children of recent immigrants coming from those countries.

By 2005, the kindergarten population in Saskatoon had increased by about 60%, and despite an increased proportion of girls, boys still slightly outnumbered girls. Like many Canadian communities, Saskatoon also became more diverse in ethnicity and culture. This growing diversity was reflected in the change in the proportion of children born outside Canada, as well as in first language(s) acquired at home. Compared with 2001, in 2005 Saskatoon had a larger proportion of children born outside Canada. As a result, more than 40% of kindergarten children spoke neither English nor French as their first language.

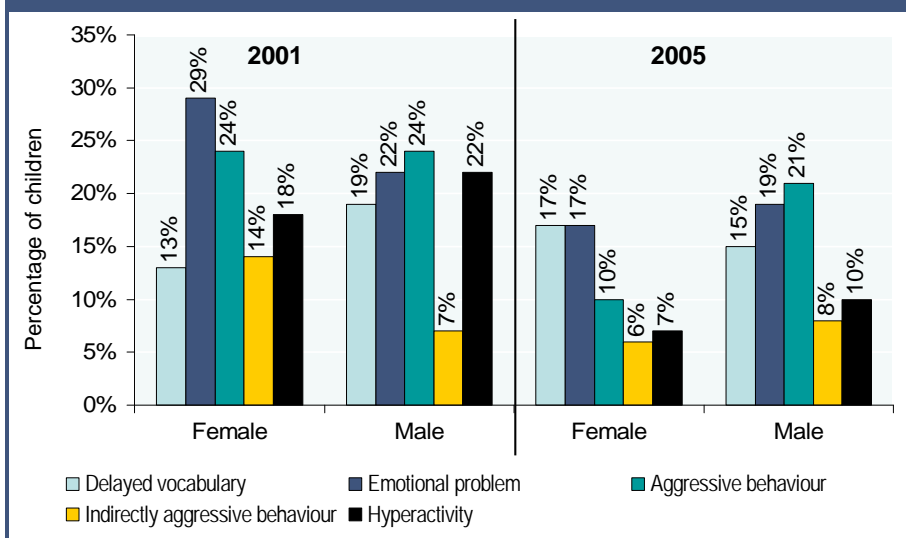
Table 4.1 Kindergarten children by gender, birthplace and first language(s), Saskatoon and UEY-II communities (percentages, 2001 and 2005)				
	Saskatoon		UEY-II communities	
	2001	2005	2001	2005
Sample size	425	436	2505	3264
Population size	1370	2214	7788	7960
Gender				
Girls	43.3	46.9	48.7	49.1
Boys	56.7	53.1	51.3	50.9
Birthplace				
Canada	84.3	78.0	94.0	92.5
United States	1.9	1.1	0.6	0.9
Europe	1.2	0.9	0.6	0.8
Asia	1.9	6.9	0.8	1.0
Other	10.7	13.1	4.0	4.7
Aboriginal status				
Yes	17.9	17.0	6.4	8.1
First language(s) learned at home				
English only	63.1	48.3	56.7	65.2
French only	-	-	23.7	14.8
English & French only	-	0.2	0.3	0.2
English & French & other	-	-	-	0.1
English & other (not French)	3.6	7.6	0.8	1.9
French & other (not English)	-	-	0.4	0.8
Neither English nor French	33.3	43.9	18.0	17.0
Total	100.0	100.0	100.0	100.0

4.1.2 Children's characteristics and developmental outcomes

Research has identified gender as an important factor influencing children's developmental outcomes. At the beginning of kindergarten, girls are generally slightly better than boys in reading and prosocial skills, about the same in math and general knowledge, and less likely to engage in problem behaviours. These gender differences were noticeable among Saskatoon children, but there was also evidence that some gender gaps may have narrowed.

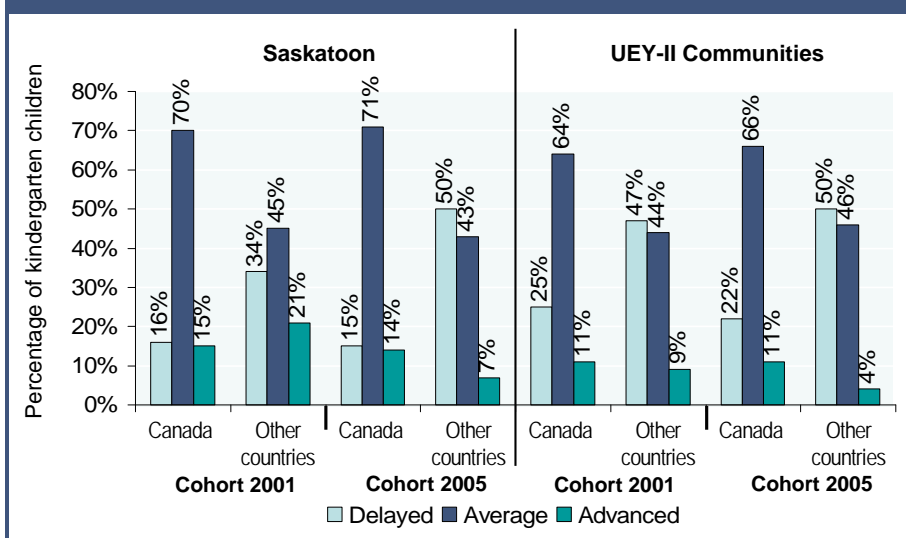
As illustrated in Figure 4.1, in 2001, more boys than girls in Saskatoon were delayed in vocabulary skills, while more girls than boys showed signs of emotional problems and indirectly aggressive behaviours. These gender differences were minimal among the children surveyed in 2005, although boys were twice as likely as girls to be physically aggressive. In addition, data from both survey years show that boys were slightly more likely than girls to be hyperactive.

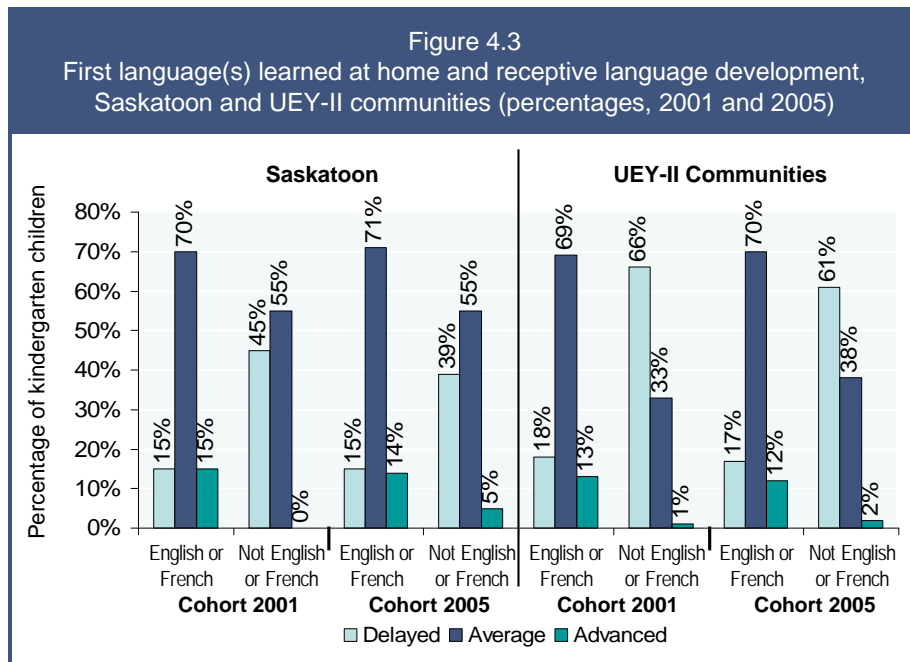
Figure 4.1
Gender and kindergarten children's developmental outcomes,
Saskatoon (percentages, 2001 and 2005)



Ethnicity, birthplace and first language(s) were also important in explaining differences in developmental outcomes among young children in Saskatoon. As shown in Figures 4.2 and 4.3, children born outside Canada, or children whose mother tongue was not English, were two to three times more likely to receive low scores on the Peabody Picture Vocabulary Test – Revised (PPVT-R), which signify delayed vocabulary development, than children born in Canada or children who spoke English as their first language.

Figure 4.2
Kindergarten children's birthplace and receptive language development,
Saskatoon and UEY-II communities (percentages, 2001 and 2005)





4.2 Families: Characteristics and Resources for Children’s Development

4.2.1 Characteristics of young children’s families

Saskatoon’s increasingly multicultural nature was also reflected in the increased proportion of parents born outside North America and Europe. As shown in Table 4.2, in 2001, fewer than 50% of PMK were born in Asian or “other” countries; by 2005 that proportion had increased to 54%.

Table 4.2
Distribution of kindergarten children by PMK birthplace, Saskatoon and UEY-II communities
(percentages, 2001 and 2005)

	Saskatoon		UEY-II communities	
	2001	2005	2001	2005
PMK birthplace				
Canada	39.9	34.5	70.7	73.1
United States	1.9	0.5	1.0	1.2
Europe	15.7	11.3	5.0	2.6
Asia	15.0	17.1	7.1	7.2
Other	27.5	36.9	16.2	16.0
Not stated	-	-	-	4.9
Total	100.0	100.0	100.0	100.0

The majority of Saskatoon parents were in good health, with over 90% saying they enjoyed generally good to excellent health in 2005. As well, the proportion of PMK reporting a chronic health condition fell from 37% in 2001 to 29% in 2005 (see Table 4.3).

	Saskatoon		UEY-II communities	
	2001	2005	2001	2005
PMK birthplace				
Excellent	30.1	34.8	33.4	33.1
Very good	39.1	32.6	37.0	38.1
Good	23.9	25.7	21.0	22.3
Fair	5.6	6.0	6.5	4.9
Poor	1.4	0.9	2.1	1.5
PMK with chronic condition				
Yes	36.9	29.1	35.7	40.5
No	63.1	70.9	64.3	59.3
Total	100.0	100.0	100.0	100.0

As elsewhere in Canada, more and more young children in Saskatoon lived with parents who have completed post-secondary education (see Table 4.4). Between 2001 and 2005, the percentage of PMK with a university degree or college diploma had gone up more than 50%, from 38% to 58%. Meanwhile, the proportion of PMK who had not completed secondary education declined from 12% to 5%. Similar trends were observed across the UEY-II communities, although the degree of change was smaller.

	Saskatoon		UEY-II communities	
	2001	2005	2001	2005
PMK education level				
Less than secondary school	11.6	5.1	16.8	10.4
Secondary school	12.2	14.5	17.6	18.5
Beyond secondary school	37.9	22.9	26.4	20.3
College or university	38.3	57.5	39.1	50.7
PMK employment status				
Currently working	68.5	64.9	66.0	68.2
Not working/worked last year	3.9	5.7	6.1	7.1
Not working/did not work last year	27.6	27.6	27.9	24.7
Parents' employment status				
At least one parent working	87.0	80.1	80.5	82.1
No parent working	13.0	19.9	19.5	17.9
Total	100.0	100.0	100.0	100.0

Table 4.4 also shows the change in labour market participation by young children's parents in Saskatoon. In 2005, about 65% of PMK were working outside the home, a slight decrease compared with the 69% recorded in 2001. About one in five Saskatoon children lived in families with no parent in paid employment in 2005. This represents an increase of 7% over the 2001 figure.

Changes were also observed in the structure of young children's families in Saskatoon (see Table 4.5). Considerably more Saskatoon children lived in a two-parent family in 2005 than in 2001 (82% vs. 74%). As well, about 76% of children lived with one or more siblings in 2005, an increase of more than 12% over the 2001 figure (68%).

Table 4.5				
Distribution of kindergarten children by family structure, Saskatoon and UEY-II communities (percentages, 2001 and 2005)				
	Saskatoon		UEY-II communities	
	2001	2005	2001	2005
Number of parents in household				
Two parents	73.7	81.6	69.5	75.4
One parent	23.5	18.0	28.0	24.1
Child does not live with a parent	2.8	0.4	2.5	0.4
Number of children (0–17 years) in household				
One child	32.2	23.8	23.3	18.6
Two children	44.6	47.1	44.2	46.9
Three children	18.2	21.9	21.7	24.2
More than three children	5.0	7.2	10.8	10.3
Total	100.0	100.0	100.0	100.0

Family income is an important indicator of the economic well-being of families. Table 4.6 displays the average family income for Saskatoon children, as well as family income level based on the low-income cut-off (LICO) established by Statistics Canada.

Table 4.6				
Distribution of kindergarten children by household income, Saskatoon and UEY-II communities (percentages, 2001 and 2005)				
	Saskatoon		UEY-II communities	
	2001	2005	2001	2005
Household income				
Mean (dollars, inflation-adjusted)	\$58,315	\$61,068	\$51,898	\$57,231
Below LICO	20.4	22.4	22.4	29.4
LICO to less than 2 times LICO	44.3	42.1	35.6	37.7
2 times LICO to less than 3 times LICO	23.5	23.8	24.3	20.6
3 times LICO or above	11.8	11.7	17.7	12.3
Total	100.0	100.0	100.0	100.0

Family Income Status Based on LICO

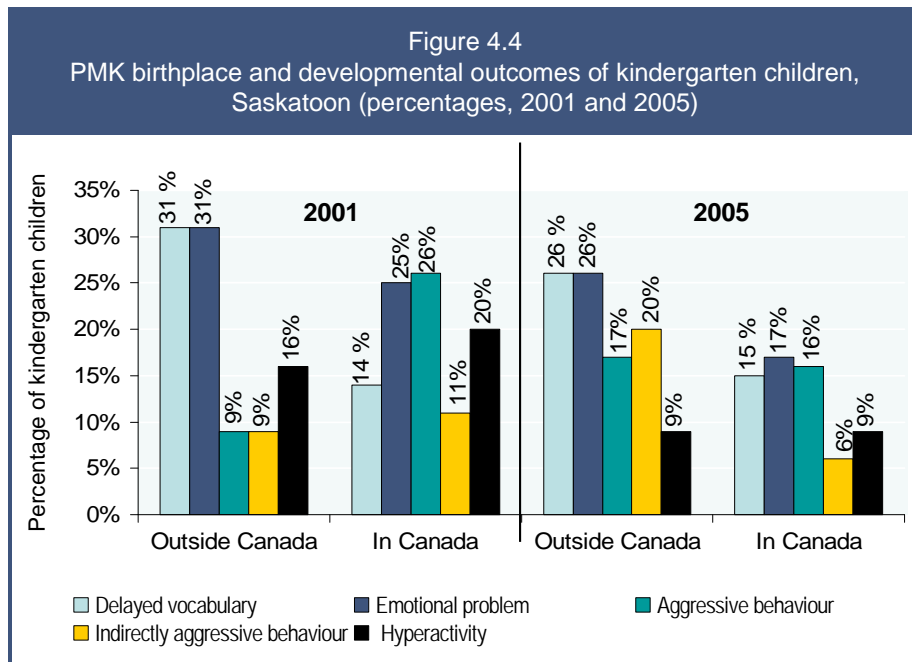
Income status was determined by dividing household income by the value of Statistics Canada's low-income cut-off (LICO). The LICO takes into account different urban and family sizes, and is updated annually using the Consumer Price Index.

As shown in Table 4.6, the average household income in Saskatoon was high among the UEY-II communities, increasing by almost \$3,000 between 2001 and 2005 (after adjustment for inflation).⁴ However, despite the sizable improvement in average household income, the percentage of children living below LICO rose slightly over the period, from 20% in 2001 to 22% in 2005.

4.2.2 Family characteristics and children's developmental outcomes

Figure 4.4 displays percentages of children who received low PPVT-R scores or showed signs of emotional problems, aggressive behaviours, indirectly aggressive behaviours and hyperactivity by PMK birthplace.

⁴ The adjusted income is calculated using changes in the provincial inflation rate between 2001 and 2005. The inflation rate is determined using the ratio of Consumer Price Index (CPI) between the two survey years (i.e., CPI2005/CPI2001). For Saskatchewan, this inflation rate was 9.8%. The adjusted household income in 2005 = estimated household income in 2005 / (1+inflation).

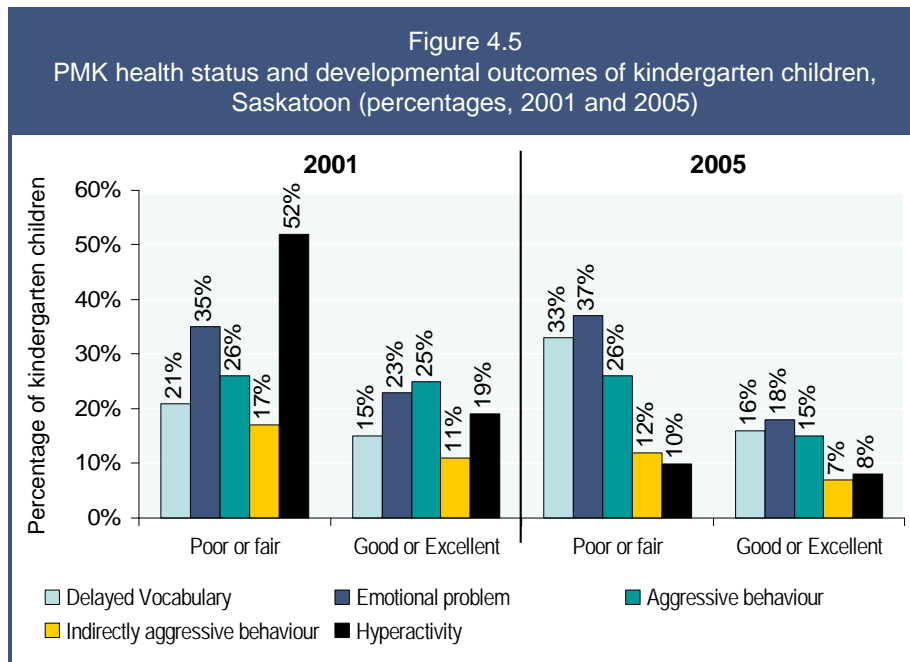


The results show that, in both 2001 and 2005, children with PMK born outside Canada were much more likely than others to experience delayed vocabulary development (low PPVT-R scores) or show emotional problems. However, there were some differences between the survey years with respect to aggressive and indirectly aggressive behaviours and hyperactivity: in 2001, children of immigrants were less likely than others to exhibit aggressive or hyperactive behaviours – a finding not confirmed in 2005. As well, in 2005, children of immigrants were three times more likely than others to exhibit indirectly aggressive behaviours (20% vs. 6%), although the 2001 data showed little difference between the two groups.

PMK born outside Canada reflect a variety of norms, values, ethnicities, cultures and linguistic backgrounds. Some characteristics – such as belonging to a racial or ethnic minority group – likely represent challenges related to labour market participation, health status and civic participation. Therefore, further studies are required to unravel the underlying relationships between parents’ birthplace and the developmental outcomes of young children.

Parents’ health, especially a mother’s physical and emotional health, can affect the level, as well as the quality, of time and attention that parents devote to their children. Since these factors are instrumental in the healthy development of children, a parent’s poor health will likely have a negative impact on development.

Figure 4.5 illustrates the percentages of children who received low PPVT-R scores or showed signs of emotional problems, aggressive behaviours, indirectly aggressive behaviours and hyperactivity in relation to PMK health status.



Data from both 2001 and 2005 indicate that a mother's poor health could be a risk factor for children in various ways. For example, Saskatoon children with PMK in poor health were more likely than others to have delayed vocabulary development, show signs of emotional problems, or exhibit aggressive and indirectly aggressively behaviours or hyperactivity.

Research indicates that maternal education level is associated with children's developmental outcomes such as academic achievement. Figure 4.6a displays the distribution of Saskatoon children according to their PPVT-R level (delayed, average and advanced) and PMK educational level. Data from both 2001 and 2005 confirm that PMK with higher educational levels are less likely to have children who experience difficulties in vocabulary development.

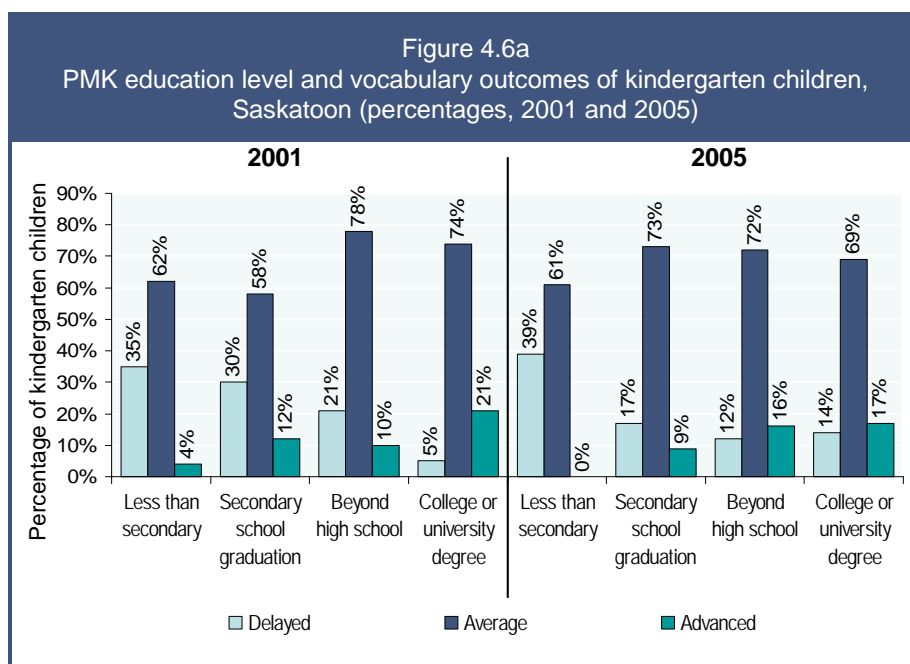
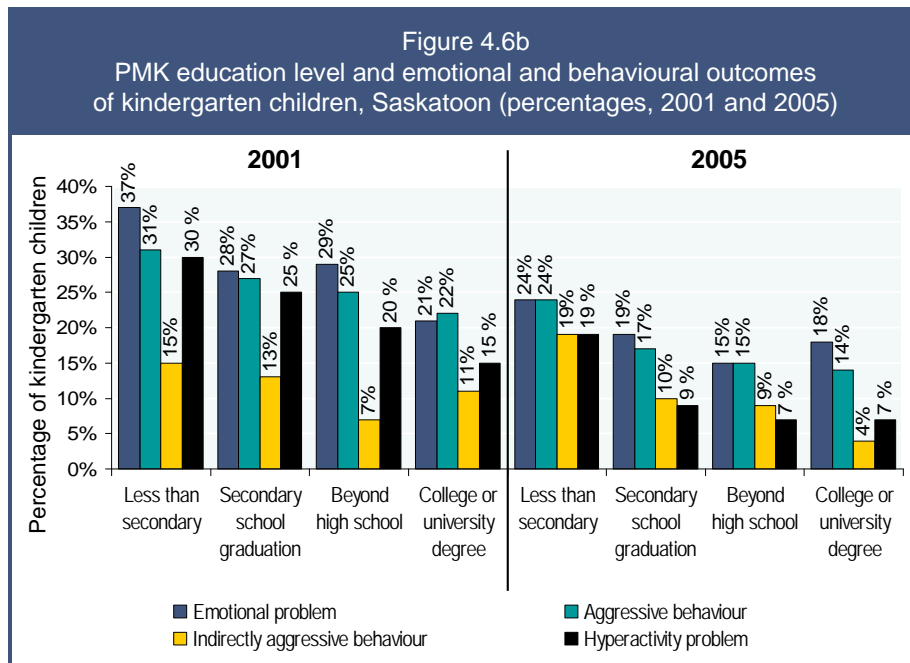
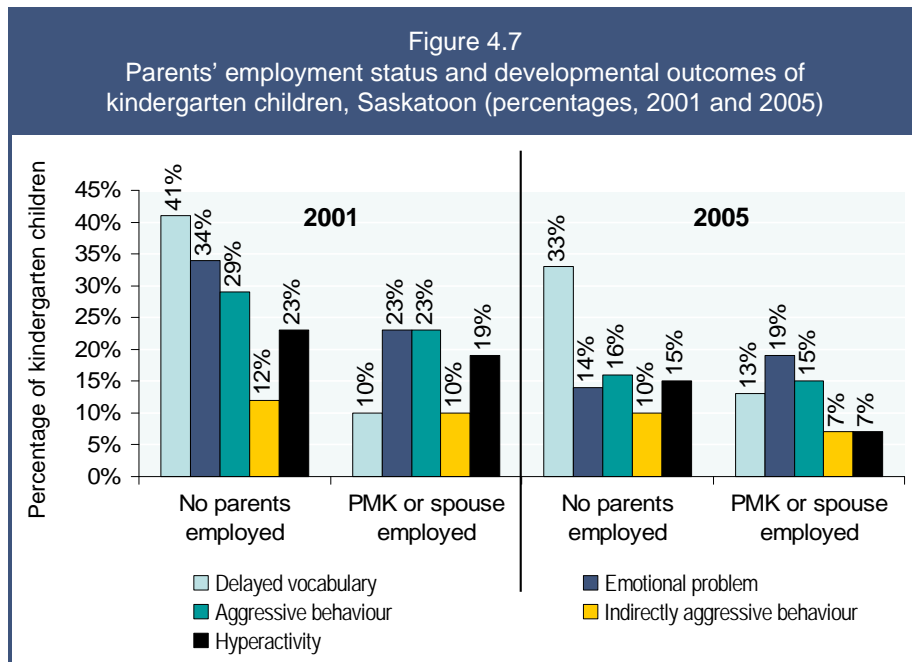


Figure 4.6b explores the relationship between PMK educational level and children’s risk of emotional problems and antisocial behaviours. The results indicate that children of PMK who did not complete secondary education were generally much more likely than others to show signs of emotional problems or exhibit aggressive and indirectly aggressive behaviours. These children also tended to be more hyperactive than others. In most cases, the differences were most marked between children of PMK with less than secondary education and those of PMK who completed post-secondary education.



Parents’ employment contributes toward family income, which in turn affects resources available for raising children. At the same time, parents’ employment can also directly affect a child’s health and educational outcomes. For example, working parents often place more emphasis than non-working parents on independence training for children, which can be an asset for children as they learn. Figure 4.7 shows the percentage of vulnerable children (those who had low PPVT-R scores, signs of emotional problems, aggressive or indirectly aggressive behaviours and hyperactivity) by parents’ employment status (at least one parent working outside the home vs. no parent gainfully employed).



The data indicate that parents' employment situation is significantly related to Saskatoon children's cognitive, emotional and behavioural development. For example, in both 2001 and 2005, children with no parents working were more likely than children with working parents to receive low PPVT-R scores and show signs of hyperactivity. The 2001 data also show that children in no-earner families were more likely to have emotional problems and exhibit aggressive behaviours. However, these findings were not confirmed in the 2005 survey results.

Family structure and family size are important factors in child development because they can affect the quantity, as well as the quality, of time and attention that parents devote to their children. They also influence the financial resources available for each child. Single-parent families are more likely to have low family incomes, which means they face more challenges and stresses in raising their children. Figure 4.8 depicts the percentages of vulnerable children by family structure (one-parent vs. two-parent family).

The results from both 2001 and 2005 suggest that Saskatoon children living in single-parent families were more likely than those in two-parent families to register delayed vocabulary scores and show aggressive behaviours. The 2001 data also indicate that children of single parents were more inclined to show signs of emotional problems and hyperactivity. The 2005 data provide some additional evidence that children in single-parent families were more prone to indirectly aggressive behaviours.

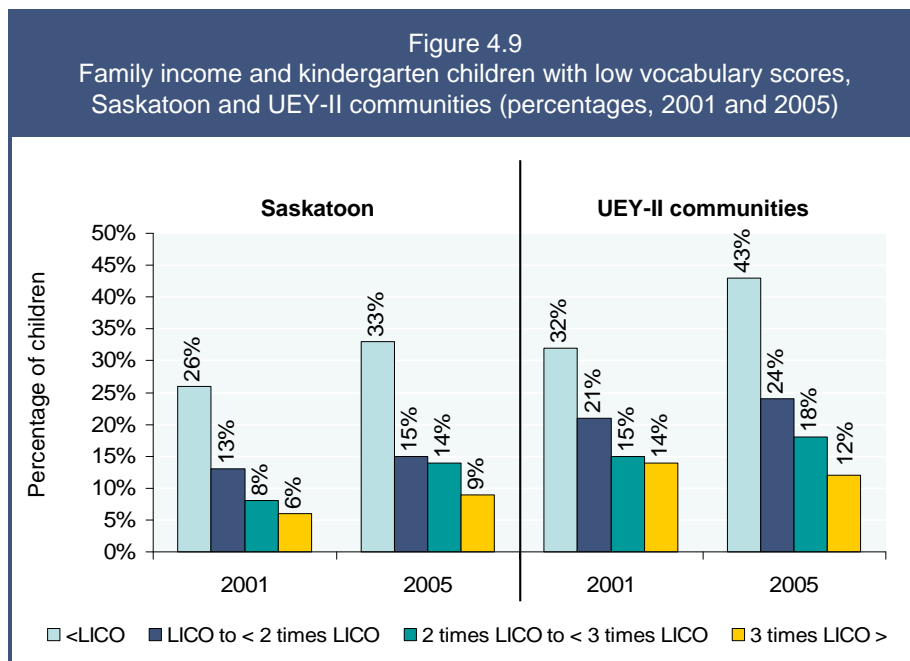
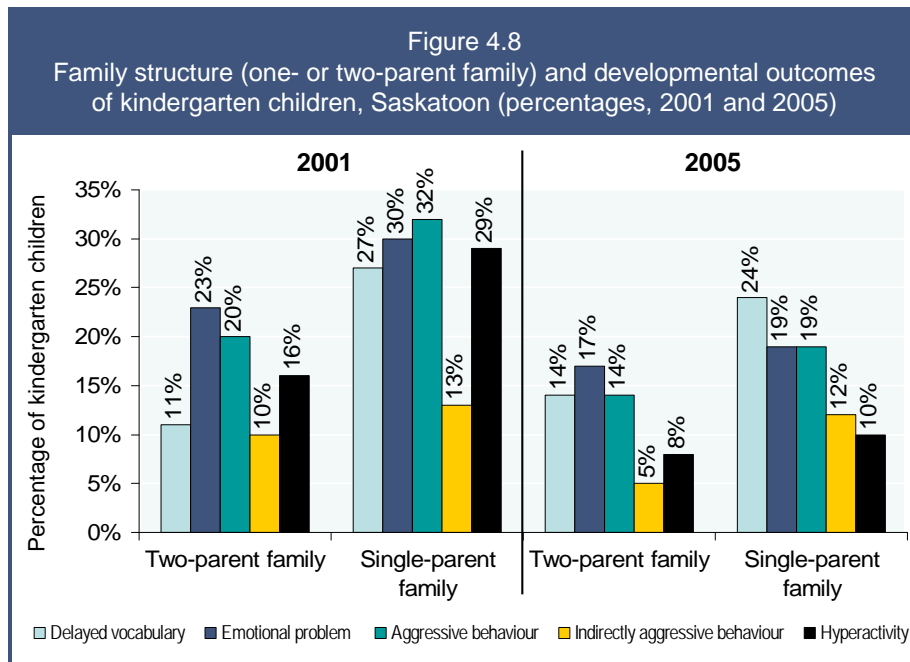
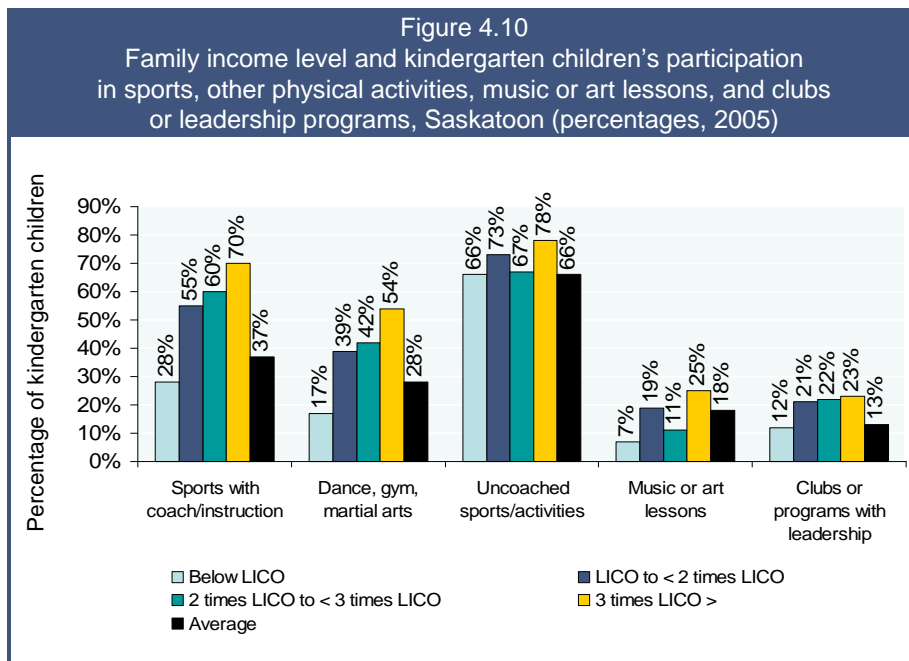


Figure 4.9 illustrates how family income level can affect children’s cognitive outcomes, in this case their scores on the PPVT-R. In general, the data show that the percentage of children with low PPVT scores declines as family income level increases. Specifically, the results from both 2001 and 2005 indicate that children at the lowest family income level (below LICO) in Saskatoon were three or four times more likely to have delayed vocabulary development than children at the highest income level (three times LICO or above).

The data also indicate that children with vocabulary difficulties come from all income groups. Thus, it is important to note that income is not the only factor influencing children’s vocabulary development. Other factors, such as parental education and good parenting, can also have positive impacts on vocabulary scores and school success.

Family income level is also strongly linked to children’s participation in early childhood activities, particularly supervised group activities. These activities are important because they help build the foundation for core skills and success in school. In addition, children learn to socialize with their peers during these activities. Thus, by influencing children’s access to early childhood activities, family income may also have an indirect influence on children’s developmental outcomes.

The results from the Communities Survey appear to support this research finding (see Figure 4.10). Saskatoon children in families with higher incomes were much more likely to participate in coached sports, music or art lessons, and dance, gym or martial arts classes compared with children in families with lower incomes. On the other hand, activities such as uncoached sports did not appear to be associated with family income level.



4.3 Families: Family Processes and Children’s Developmental Outcomes

This section focuses on some major family processes that research indicates are related to children’s outcomes: family functioning, parent–child interactions, parents’ engagement in learning activities with their children and childcare arrangements.

4.3.1 Family functioning

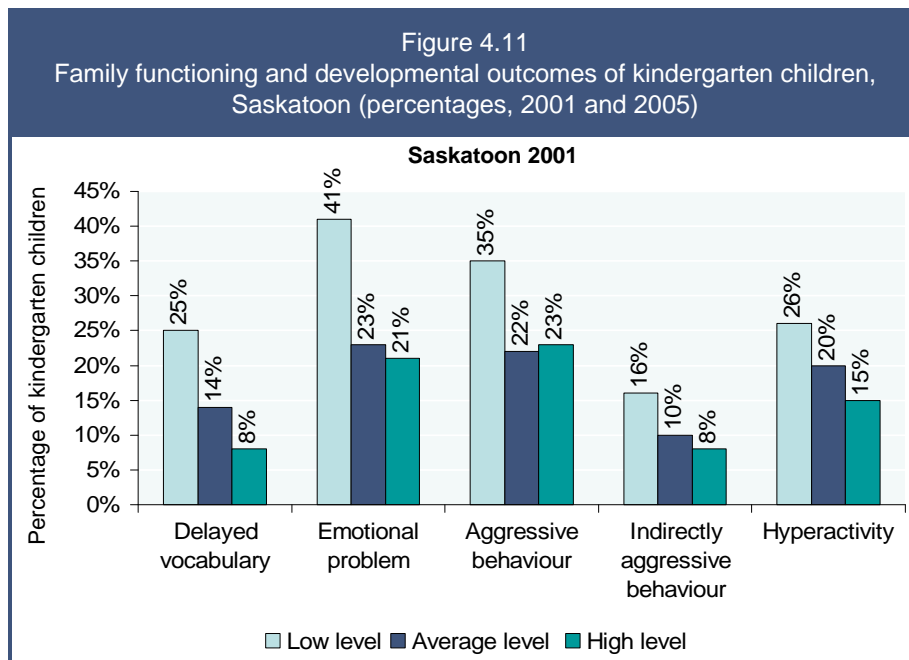
Family functioning refers mainly to the cohesiveness and adaptability of the family. It is more concerned with how well the family functions as a unit than the relationships between spouses or between parents and their children. In both cycles of data collection for the Communities Survey, information was gathered on whether PMK felt family members were able to communicate, discuss feelings and concerns among themselves, make decisions and solve problems collectively, get along well with one another, and feel accepted for who they are.

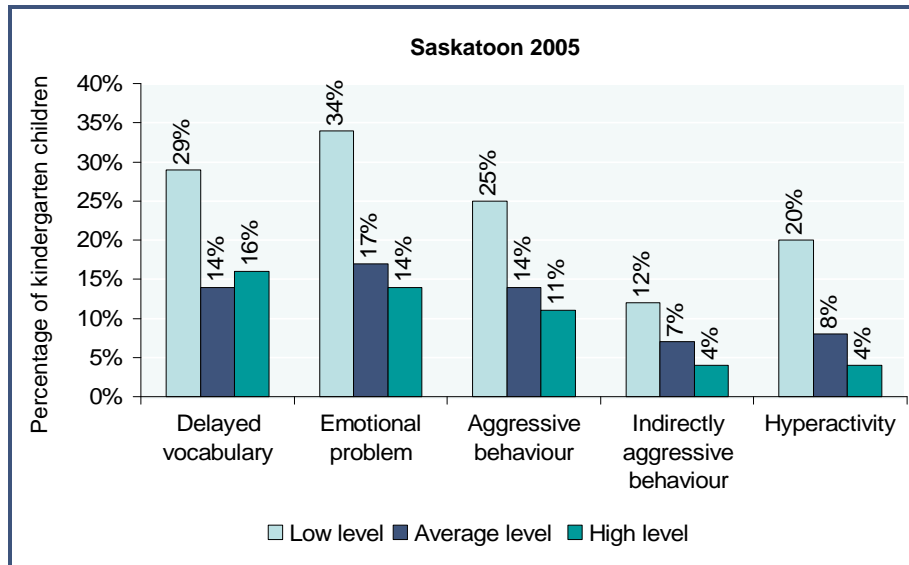
Table 4.7 Distribution of kindergarten children by level of family functioning, Saskatoon and UEY-II communities (percentages, 2001 and 2005)				
	Saskatoon		UEY-II communities	
	2001	2005	2001	2005
Family functioning				
Mean (rescaled to 100)	75.4	75.8	76.3	75.1
High level (mean + 1 standard deviation)	19.9	18.2	23.2	18.6
Average level (within 1 standard deviation)	63.5	72.9	64.4	69.5
Low level (mean – 1 standard deviation)	16.6	8.9	12.4	11.9

As indicated in Table 4.7, the mean scores on family functioning for Saskatoon families were almost identical in 2001 and 2005 and also close to the UEY-II average. However, means indicate only how well families function on average. They tell us nothing about what proportion of families function above or below the “normal” range or how above or below normal functioning may affect children’s developmental outcomes. To explore this issue further, we classified family functioning into three levels: “high,” “average” and “low.” A family functioning score that was one standard deviation below the UEY-II sample mean represented a low level of family functioning, a score one standard deviation higher than the UEY-II sample mean represented a high level of family functioning, and scores within one standard deviation of the mean were scores for an average or normal level of family functioning. (Note: we classify other family process variables in the same way in the following sections.)

The results, based on this classification, indicate that the majority of Saskatoon children’s families functioned well and that the percentage functioning at the average level or above increased between 2001 and 2005 (83% vs. 91%). In 2005, about 9% of Saskatoon children lived in families that functioned less well than the majority of families in the UEY-II communities – almost 50% fewer than in 2001.

Figure 4.11 presents the distribution of vulnerable children in Saskatoon (defined as those with low PPVT-R scores, signs of emotional problems, aggressive behaviours, indirectly aggressive behaviours or hyperactivity) by levels of family functioning.





The results indicate that behaviours as well as cognitive and emotional development were significantly associated with family functioning. Data from both 2001 and 2005 indicate that children from families functioning at the low level were much more likely than others to receive low PPVT-R scores, show signs of emotional problems, or display aggressive or indirectly aggressive behaviours. They were also more likely to be hyperactive than children from families that functioned at the average level or above.

4.3.2 Parent–child interactions

Research has identified factors in the family environment of children that contribute to their developmental outcomes. These include parent–child interactions and cognitive stimulation in the home. Children who experience positive interactions with a nurturing, involved parent have been found to have better academic and social outcomes than others.

The Communities Survey explored parent–child interactions according to whether they were “positive,” “consistent,” “rational” or “effective.” The positive parent–child interactions score was based on PMK responses to questions asking how often they praise their children, how often they talk and play with their children, and how often they laugh together. The consistent parent–child interactions score was based on PMK responses to questions asking how often children get away with things for which they should have been punished and how often PMK make sure their child follows a command to do something. The rational parent–child interaction score was based on PMK responses to questions on how they react to their children’s misbehaviour. For example, if a child misbehaved, did the parents scold or shout at the child, calmly discuss the problem, use physical punishment, or describe alternative and acceptable ways of behaving? Lastly, the effective parent–child interactions score was based on PMK responses to questions on whether they were often annoyed with their child for saying or doing forbidden things, often angry when they punished their child, and often had to discipline the child repeatedly for the same thing.

Table 4.8 presents the mean scores on the four measures of parent–child interactions (parenting styles) in Saskatoon, with original scores rescaled on a 100-point scale to facilitate comparisons. Higher scores indicate higher performance on each measure.

	Saskatoon		UEY-II communities	
	2001	2005	2001	2005
Parent–child interactions				
Positive parent–child interaction	72.5	74.5	72.1	74.1
Effective parent–child interaction	65.2	67.4	69.0	68.9
Consistent parent–child interaction	70.2	70.0	67.3	68.7
Rational parent–child interaction	56.7	58.0	58.2	59.1

The data indicate that Saskatoon PMK scored close to the UEY-II averages on all four parenting measures, scoring higher on positive parenting and consistent parenting than on effective parenting and rational parenting. To identify proportions of children potentially at risk due to poor parenting practices, we classified parenting scores into three levels (“high,” “average” and “low”), based on the mean and standard deviation of the UEY-II sample (much as we did with family functioning scores).

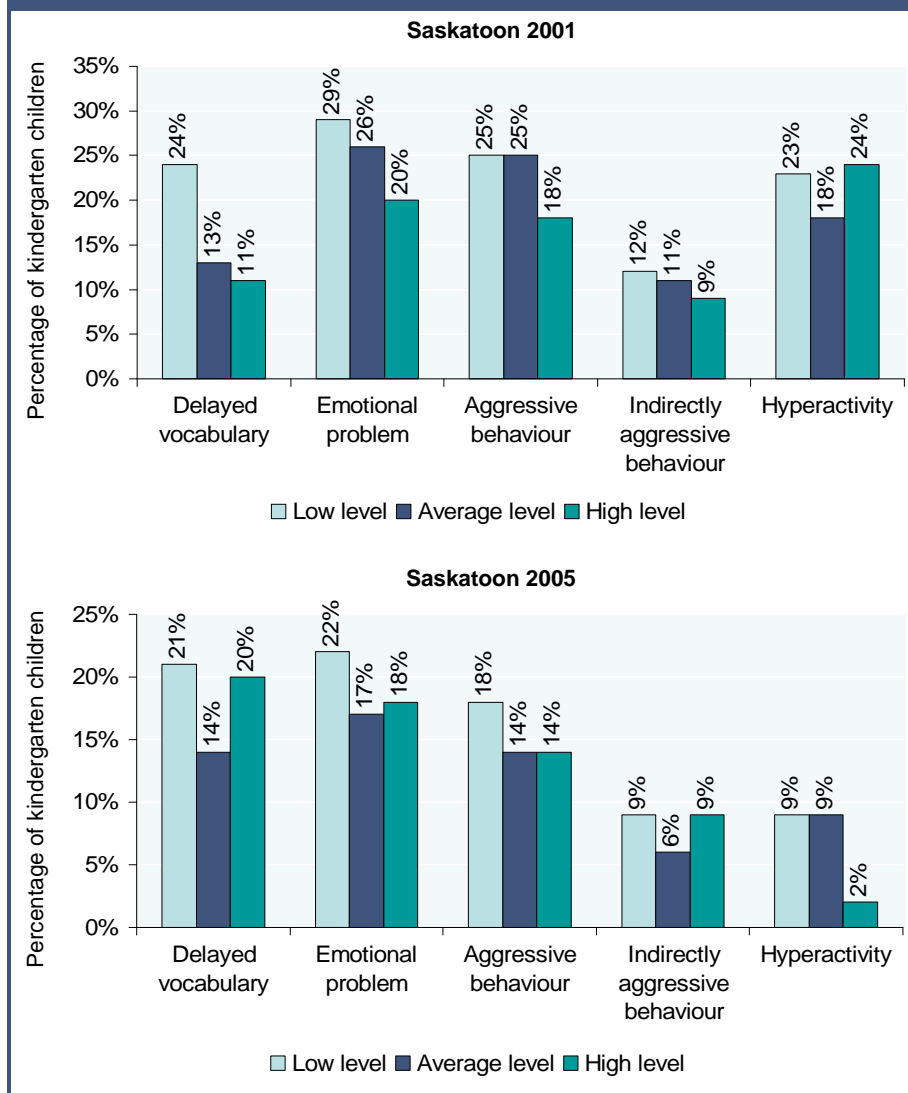
	Saskatoon		UEY-II communities	
	2001	2005	2001	2005
Positive parenting				
High level	11.2	13.8	10.9	14.6
Average level	77.4	76.9	76.2	75.3
Low level	11.4	9.3	12.9	10.1
Effective parenting				
High level	9.2	12.1	18.9	16.9
Average level	69.5	73.1	67.0	69.7
Low level	21.3	14.8	14.1	13.4
Consistent parenting				
High level	20.8	17.9	13.1	16.9
Average level	65.4	68.4	69.4	68.0
Low level	13.7	13.7	17.4	15.1

The analyses presented in Table 4.9 indicate that in 2005 the majority (more than 85%) of Saskatoon PMK performed at the average level or above in parenting practices, based on the UEY-II norm. Between 2001 and 2005, there was a slight increase in the percentage of PMK showing a high level of positive parenting, as well as a marked increase in the proportion of PMK showing a high level of effective parenting. On the other hand, about 10% to 15% of Saskatoon children may have been at risk due to low-level parenting practices.

Figure 4.12 displays the distribution of vulnerable children (defined as those receiving low PPVT-R scores, showing signs of emotional problems, aggressive behaviours, indirectly aggressive behaviours or hyperactivity) by the three levels of parenting.

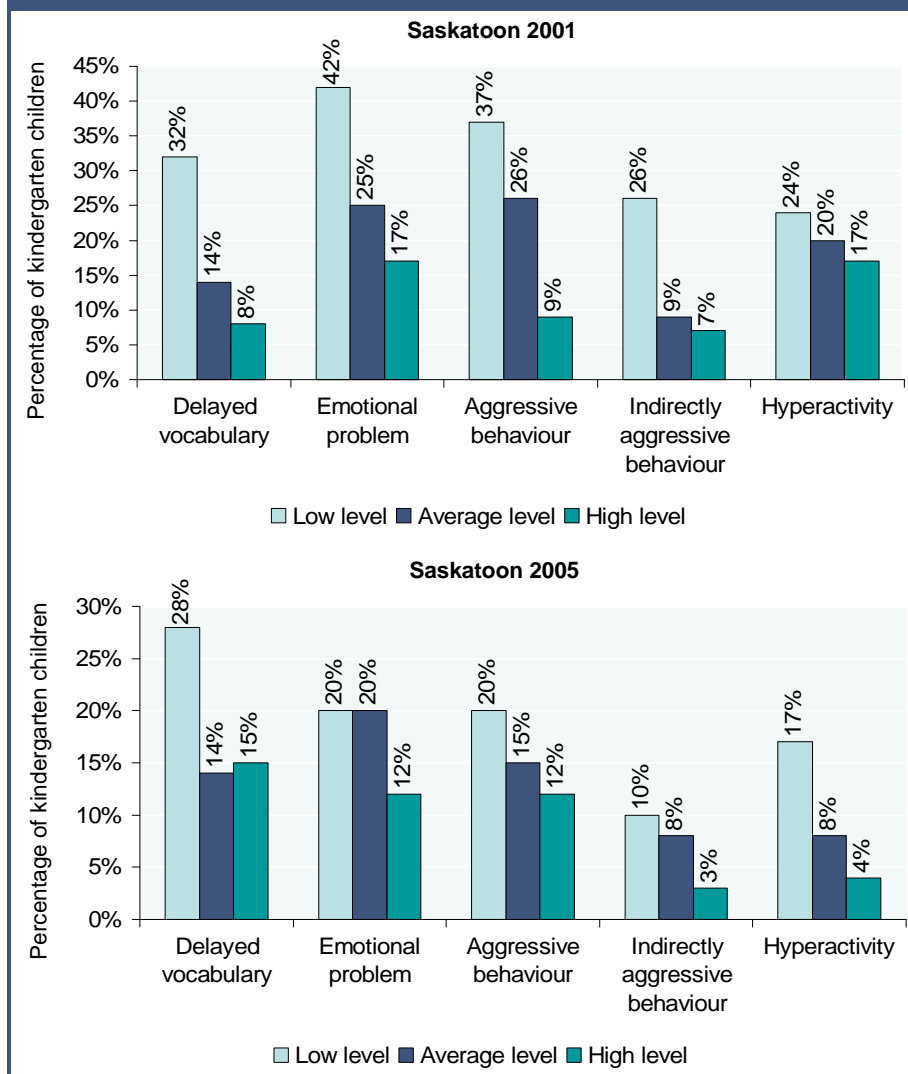
The data from 2001 show that positive parenting appeared to be related to children’s vocabulary skills and emotional development: considerably higher percentages of children in families with low-level positive parenting, compared with other children, received low PPVT-R scores or showed signs of emotional problems. The results from 2005 further confirmed the link between positive parenting and children’s emotional development. The data also indicate that positive parenting could be related to children’s social behaviours: children in families with low-level positive parenting were more likely than others to exhibit aggressive behaviours.

Figure 4.12
Positive parenting and developmental outcomes of kindergarten children,
Saskatoon (percentages, 2001 and 2005)



The analyses shown in Figure 4.13 explore the role of consistent parenting in various developmental outcomes for Saskatoon children. The data from 2001 indicate that consistent parenting was strongly related to better outcomes in all five developmental domains. The 2005 results provided further evidence for such linkages, although the gaps between children with highly consistent parents and those with less consistent parents were generally smaller in 2005 than in 2001. The only exception was in the area of hyperactivity, where the gap in 2005 was much larger than in 2001.

Figure 4.13
 Consistent parenting and developmental outcomes of kindergarten children,
 Saskatoon (percentages, 2001 and 2005)



4.3.3 Engagement in literacy activities at home

Parents who engage in literacy-related activities with their children can have a major influence on developmental outcomes. In particular, studies find that the amount of time parents spend reading to their children can significantly affect their development regardless of a family's socio-economic status. As part of the Communities Survey, PMK were asked whether and how often they were engaged with their children in learning activities at home. These activities included reading and telling stories to their children, teaching them numbers and words, teaching them how to read and encouraging them to use numbers in daily activities.

Table 4.10				
Distribution of kindergarten children by literacy activities at home, Saskatoon and UEY-II communities (percentages, 2001 and 2005)				
	Saskatoon		UEY-II communities	
	2001	2005	2001	2005
How often is child read to?				
Daily	73.6	76.9	58.1	67.9
A few times a week	22.1	20.2	30.2	25.2
Once a week	2.1	1.4	5.5	3.1
A few times a month	1.7	0.9	2.4	1.8
Rarely	0.4	0.7	3.8	1.9
How often is child taught numbers?				
Daily	43.4	50.7	45.7	53.4
A few times a week	42.2	34.7	38.3	33.4
Once a week	8.0	7.3	7.7	6.3
A few times a month	3.3	2.8	3.7	2.3
Rarely	3.1	4.1	4.7	4.2
How often is child taught words?				
Daily	31.9	42.9	39.9	48.5
A few times a week	31.5	31.7	31.3	29.8
Once a week	9.2	8.9	8.3	7.2
A few times a month	4.3	3.2	4.6	3.0
Rarely	23.2	13.1	15.9	11.2
How often is child told stories?				
Daily	56.7	64.5	46.3	55.7
A few times a week	24.0	23.2	31.0	28.6
Once a week	7.1	6.0	8.6	6.6
A few times a month	5.0	3.9	5.7	4.4
Rarely	7.3	2.3	8.4	4.3
How often are songs sung with child?				
Daily	35.6	42.9	33.8	42.5
A few times a week	34.2	27.7	34.6	30.3
Once a week	12.9	13.8	12.1	11.2
A few times a month	7.8	6.0	7.2	5.7
Rarely	9.4	9.2	12.3	10.0
How often is child encouraged to use numbers?				
Daily	71.0	77.8	57.0	66.3
A few times a week	19.8	13.1	27.4	21.0
Once a week	3.1	3.4	4.7	4.2
A few times a month	2.3	2.1	3.1	2.3
Rarely	3.8	3.4	7.7	5.8
Total	100.0	100.0	100.0	100.0

As shown in Table 4.10, data from both 2001 and 2005 indicate that the majority of the Saskatoon PMK had been actively engaged in providing a stimulating home environment for their children. They read to their child, taught their child numbers and helped their child learn words, either daily or at least a few times a week.

4.3.4 Childcare arrangements

National data for Canada indicate that about half of children aged 0 to 5 years are in childcare while their parents are engaged in paid work or further education and training. For these children, childcare is an important factor in their development.

According to PMK, the proportion of children receiving non-parental childcare in Saskatoon increased by 30% between 2001 and 2005, up from 47% to 61%. The same trend was also observed across the UEY-II communities, with the 2005 cohort being 20% more likely than the 2001 cohort to be in non-parental childcare (55% vs. 46%).

Main type of childcare arrangement	Saskatoon		UEY-II communities	
	2001	2005	2001	2005
Other's home – non-relative	49.1	46.6	23.9	27.4
Other's home – relative	7.6	5.8	6.0	4.8
Own home – non-relative	10.1	16.9	12.5	15.8
Own home – relative (non-sibling)	6.6	7.3	9.0	9.3
Own home – sibling	1.6	2.3	1.6	2.0
Daycare centre	20.4	14.6	11.4	11.5
Before/after-school programs	3.6	5.4	30.6	26.3
Nursery/preschool	0	0.4	3.1	1.2
Child in own care	-	-	0.5	0.6
Other	0.9	0.8	1.4	1.1
Total	100.0	100.0	100.0	100.0

As Table 4.11 shows, the most common type of non-parental childcare for Saskatoon children in both survey periods was care outside the home by a non-relative, although the percentage declined from 49% in 2001 to 47% in 2005. Figures for 2005 show that the next most popular form of care was care at another's home by a relative, which increased to 17% from 10% in 2001. Daycare centres were the third most popular form of care arrangement, attended by 15% of children in 2005, a 28% decrease from 20% in 2001. Overall, just over half of children who needed or used childcare services were cared for by a non-relative either at home or outside the home. Relatives provided care for more than a quarter of children, whereas institutional care facilities provided service for another fifth of children in Saskatoon.

By comparison, children across the UEY-II communities were generally twice as likely as Saskatoon children to be enrolled in institutional facilities. About 45% of children were in this type of care in 2001, with the proportion declining to 40% in 2005. Also noteworthy was the rise in use of individual care providers outside the home in 2005, who provided care for more than 43% of children requiring childcare, up from 36% in 2001. Overall, nearly 60% of UEY-II children who required childcare in 2005 were cared for by individual care providers, whether a relative or non-relative.

4.4 Community: Neighbourhoods and Resources for Young Children

Neighbourhoods and communities provide important resources and activities such as daycare centres, schools, libraries and public pools, where children can play, learn and interact with adults and peers. Studies of the role of neighbourhoods and communities in child development indicate that both the social and physical characteristics of a community are important to a child's development. These characteristics include physical aspects relating to risk of injury or access to public facilities for children, neighbourhood/community safety, neighbourhood resources, community cohesion, quality of role models, and residents' engagement in community activities.

4.4.1 Neighbourhood environment for young children

	Saskatoon		UEY-II communities	
	2001	2005	2001	2005
Lots of families with children	6.9	6.5	6.4	6.5
Good schools, nursery schools	7.2	6.8	6.8	6.9
Adequate facilities for children	6.5	6.3	6.1	6.1
Neighbourhood safe and clean	6.9	6.5	6.4	6.6
Presence of health facilities	6.0	5.9	5.8	5.8
Actively involved residents	5.6	5.8	5.3	5.7
Accessible public transport	6.7	6.6	6.3	5.6

To assess the neighbourhood environment for children, PMK were interviewed about their perceptions of their neighbourhood as a place to raise young children. For example, they were asked to rate neighbourhood features such as the prevalence of families with young children, quality of schools and nursery schools, adequacy of recreational and health facilities for children, residents' community involvement and access to public transport. PMK rated each of these features as "excellent," "very good," "good," "fair" or "poor."

Table 4.12 summarizes PMK responses to a variety of questions concerning neighbourhood quality. The data indicate that in both 2005 and 2001 Saskatoon PMK gave their neighbourhoods scores similar to the UEY-II averages. In particular, they gave higher scores to schools or nursery schools, public transport, neighbourhood safety and cleanliness, and prevalence of families with young children. In contrast, neighbourhood health facilities and level of residents' community involvement received relatively low scores. There was some evidence that the scores for schools and nursery schools, neighbourhood safety and cleanliness, and prevalence of families with young children declined slightly between 2001 and 2005.

Table 4.13 Distribution of kindergarten children by PMK responses on neighbourhood safety and neighbour support, Saskatoon and UEY-II communities (percentages, 2001 and 2005)				
	Saskatoon		UEY-II communities	
	2001	2005	2001	2005
It is safe to walk after dark				
Strongly agree/agree	81.3	76.7	73.4	77.8
Strongly disagree/disagree	18.7	23.3	26.5	22.2
It is safe to play outside				
Strongly agree/agree	92.5	91.1	86.1	87.3
Strongly disagree/disagree	7.5	8.9	13.9	12.7
There are safe parks and play spaces				
Strongly agree/agree	91.0	90.3	84.4	84.7
Strongly disagree/disagree	9.0	9.7	15.6	15.4
Neighbours deal with problems together				
Strongly agree/agree	74.0	75.4	71.6	75.0
Strongly disagree/disagree	26.0	24.6	28.4	25.0
There are adults for children to look up to				
Strongly agree/agree	88.9	89.9	82.4	86.2
Strongly disagree/disagree	11.1	10.1	17.6	13.8
Neighbours are willing to help one another				
Strongly agree/agree	90.4	90.1	87.1	89.6
Strongly disagree/disagree	9.6	9.9	12.9	10.4
Neighbours watch out for children's safety				
Strongly agree/agree	87.8	86.1	84.4	85.8
Strongly disagree/disagree	12.2	13.9	15.6	14.2
Neighbours watch out for trouble				
Strongly agree/agree	89.9	90.1	84.5	88.0
Strongly disagree/disagree	10.1	9.9	15.5	12.0
Total	100.0	100.0	100.0	100.0

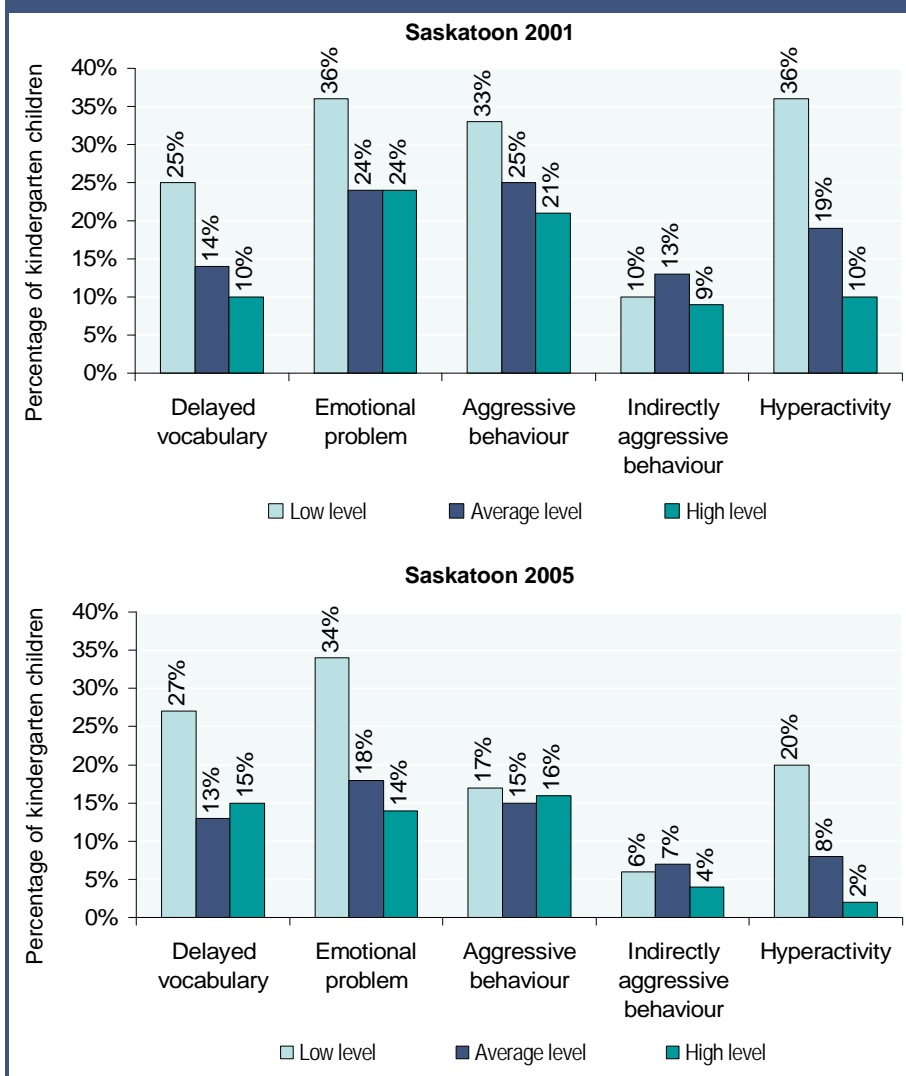
PMK perceptions of neighbourhood safety and support among neighbours were also explored in more detail. For example, PMK were asked to indicate their level of concern for their children's safety while walking and playing in the neighbourhood. They were also asked to respond to a separate group of questions concerning neighbours' ability to work together in dealing with problems, help one another, watch out for one another's children, and provide children with role models. Table 4.13 presents the results, with PMK responses broadly grouped into positive or negative categories.

As shown in Table 4.13, in 2001, the vast majority (around 90%) of PMK in Saskatoon agreed or strongly agreed with most of the statements regarding neighbourhood safety for children and support among neighbours. However, about 23% of PMK in 2005 were concerned with safety when walking after dark, a 25% increase over the 2001 figure. It is also noteworthy that about a quarter of PMK in both years did not think that neighbours worked together to solve problems in their communities.

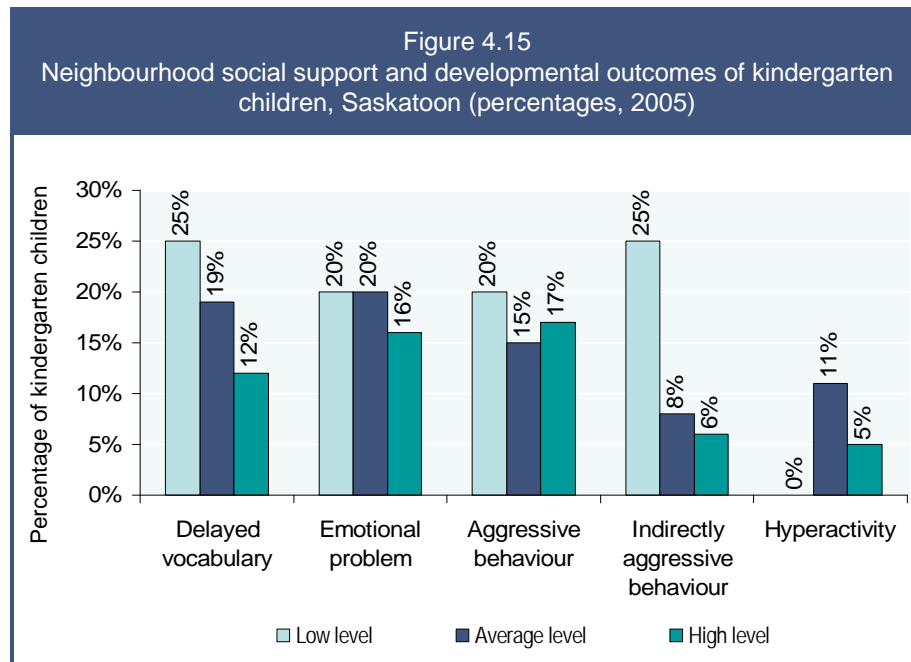
Figures 4.14 and 4.15 illustrate the extent to which neighbourhood quality and support among neighbours, respectively, were related to the developmental outcomes of Saskatoon children. Each of these factors is classified into three levels ("low," "average" and "high"), based on the norm and standard deviation of the UEY-II sample.

As Figure 4.14 indicates, neighbourhood quality may have affected children's vocabulary skills, emotional development and attention spans in both 2001 and 2005: children living in high-quality neighbourhoods were much less likely to exhibit problems in these areas than other children. The 2001 results also show that neighbourhood quality may have been linked to children's social behaviours, although the 2005 data do not support this linkage.

Figure 4.14
Neighbourhood quality and developmental outcomes of kindergarten children, Saskatoon (percentages, 2001 and 2005)



Results from 2005 also provide some evidence of a relationship between support among neighbours and children's developmental outcomes, particularly those relating to social behaviours and vocabulary development (see Figure 4.15). Children living in neighbourhoods where residents demonstrated a high propensity to work together were much less likely to display aggressive or indirectly aggressive behaviours and to receive low PPVT-R scores.



4.4.2 Use of community resources

Young children can benefit from using neighbourhood resources that enable them to participate in various educational, cultural and recreational activities – activities that are believed to have important implications for their development. Tables 4.14a to 4.14c show the percentages of children using various community resources.

		At least weekly	At least monthly	A few times a year	Not at all				
Book clubs/reading programs									
	2001	8.1	8.2	5.7	5.5	16.4	10.6	69.7	75.7
	2005	9.2	<i>10.0</i>	8.1	6.2	14.8	<i>12.2</i>	67.9	71.6
Education or science centres									
	2001	1.4	1.6	7.2	5.3	41.9	30.3	49.5	62.9
	2005	2.5	1.8	6.5	4.8	41.1	32.3	49.9	61.1
Family resources centres									
	2001	4.3	3.4	7.9	4.0	24.5	11.6	63.3	81.0
	2005	5.8	4.2	9.2	5.5	21.0	12.9	64.0	77.4

Table 4.14a shows the percentages of children in Saskatoon using educational resources apart from libraries, such as book clubs/reading programs, science centres or family resources centres. Of these, book clubs/reading programs received the highest weekly use. Even so, fewer than 1 in 10 Saskatoon children in both survey years used those educational resources at least weekly. Although the result was better than the UEY-II averages, non-participation in Saskatoon educational resources was high: some 50% to 70% of children did not use these resources at all throughout the year.

		At least weekly		At least monthly		A few times a year		Not at all	
Movies									
	2001	1.7	3.5	30.1	22.9	56.5	<i>55.6</i>	11.7	<i>17.9</i>
	2005	2.1	<i>6.4</i>	27.3	<i>23.9</i>	57.6	<i>51.0</i>	13.1	<i>18.7</i>
Theatres or plays									
	2001	0.7	<i>0.9</i>	4.8	<i>6.2</i>	46.9	<i>52.1</i>	47.6	<i>40.8</i>
	2005	0.9	<i>1.5</i>	3.9	<i>5.3</i>	50.5	<i>51.2</i>	44.7	<i>41.9</i>
Museums									
	2001	1.0	<i>0.5</i>	10.1	<i>4.4</i>	67.3	<i>49.6</i>	21.7	<i>45.6</i>
	2005	0.7	<i>0.6</i>	9.6	<i>5.5</i>	67.0	<i>54.8</i>	22.7	<i>39.0</i>
Sports events									
	2001	13.0	<i>9.5</i>	16.1	<i>9.4</i>	37.5	<i>32.6</i>	33.4	<i>48.4</i>
	2005	12.4	<i>11.9</i>	19.1	<i>12.2</i>	37.3	<i>34.4</i>	31.3	<i>41.4</i>

As Table 4.14b shows, the percentages of Saskatoon children using cultural resources (such as movies, theatres, museums and sports events) were much higher than the percentages of those using educational resources. For example, close to 90% of Saskatoon children went to the movies, about 50% attended plays, and about 70% to 80% watched spectator sports events and visited museums. However, those children who did use cultural resources used them only a few times a year. Except for attendance at theatres or plays, the proportions of Saskatoon children who did not participate in cultural activities at all were considerably lower than the averages across the UEY-II communities.

		At least weekly		At least monthly		A few times a year		Not at all	
Parks or play spaces									
	2001	67.1	63.6	19.4	19.7	11.7	13.5	1.7	3.2
	2005	73.4	<i>65.9</i>	16.0	<i>18.9</i>	7.3	<i>10.9</i>	3.2	<i>4.3</i>
Recreational/community centres									
	2001	16.8	13.3	19.2	14.6	29.7	23.4	34.3	48.8
	2005	14.5	<i>12.9</i>	27.0	<i>17.1</i>	29.9	<i>26.7</i>	28.6	<i>43.3</i>
Indoor, outdoor or wading pools									
	2001	36.2	38.4	30.4	23.8	29.8	27.9	3.6	9.9
	2005	31.0	<i>34.1</i>	33.3	<i>26.6</i>	29.0	<i>29.3</i>	6.7	<i>10.0</i>

As Table 4.14c indicates, recreational facilities enjoyed the highest rate of use among the three types of community resources. Of these, parks or play spaces were the most popular, being used by more than 73% of children at least weekly in 2005, up about 10% compared with 2001.

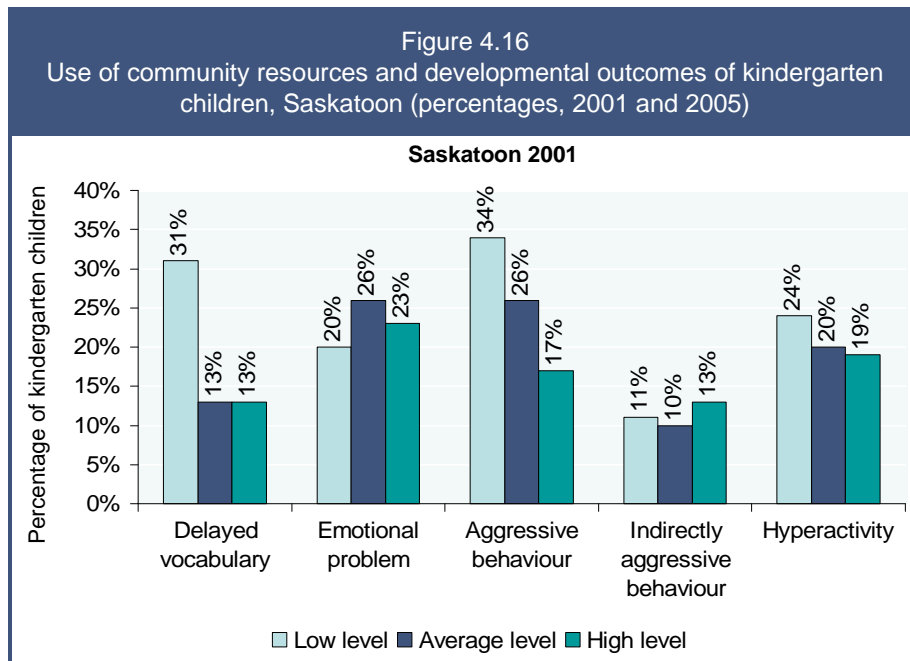
Pools, including indoor and outdoor facilities, were the next most popular recreational facility; however, there was a slight decrease in the weekly use of these facilities between 2001 and 2005 (36% vs. 31%).

About one third of Saskatoon children used recreational or community centres at least weekly or monthly in both survey years, with a marked increase in monthly users in 2005.

Table 4.15 deals with children's participation in group activities. It presents PMK responses to questions about how often their child participated in organized and unorganized sports, participated in other coached activities and the arts, and attended community clubs or leadership programs, such as Beavers or Sparks.

	Saskatoon		UEY-II communities	
	2001	2005	2001	2005
Organized sports with coaching/instruction	47.6	54.7	40.2	45.0
Other organized activity with coaching/instruction (e.g., dance, gymnastics or martial arts)	34.6	39.7	25.0	31.0
Unorganized sports or physical activity	68.5	71.4	62.9	69.0
Lessons in music, art, non-sport activity	19.3	16.1	14.0	14.9
Community clubs, groups or leadership programs (e.g., Beavers, Sparks)	27.8	20.1	21.6	23.9

In 2005, about 55% of Saskatoon children took part in organized sports on a weekly basis, while the weekly participation rate in unorganized sports was as high as 71%. In addition, about 40% of children were involved in other organized activities such as dance, gymnastics or martial arts. These participation rates were all higher than the 2001 figures. However, the percentages of children taking lessons in music, art or other non-sport activities, as well as participating in clubs or community leadership programs, declined in 2005 compared with 2001. Overall, compared with the UEY-II averages, Saskatoon children had higher participation rates in all group activities, except for clubs and community leadership programs.



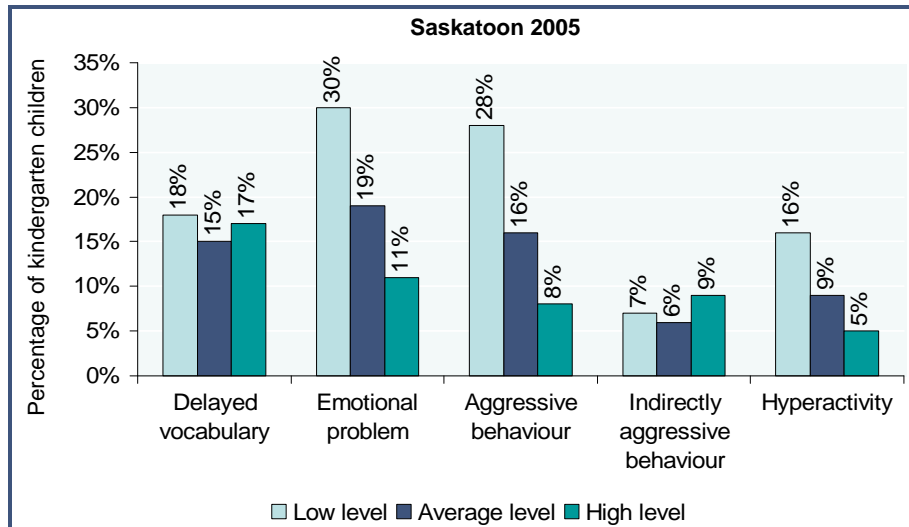


Figure 4.16 presents the percentages of at-risk children (defined as children with low PPVT-R scores, signs of emotional problems, aggressive or indirectly aggressive behaviours, or attention deficit) by level of use of community resources. In this preliminary analysis, children in Saskatoon were classified as “low level,” “average level” and “high level” users of community resources, using an index created to indicate the extent to which a child used educational, cultural and recreational resources in the community.

Results for both 2001 and 2005 show that children who were high-level users of community resources were much less likely to exhibit aggressive behaviours and hyperactivity. In addition, data from 2001 indicate that vocabulary skills were also linked to use of community resources, while data from 2005 show that high-level resource users were far less likely than other children to have emotional problems.

4.4.3 Accessibility of community resources and reasons for not using them

	Saskatoon		UEY-II communities	
	2001	2005	2001	2005
Educational resources	80.7	79.1	75.2	75.8
Cultural resources	71.4	68.0	58.7	57.9
Recreational resources	56.5	53.6	57.9	56.3

Given the relatively low level of community resource use by Saskatoon children, PMK were also asked whether educational, cultural and recreational resources were located within walking distance or within a short drive or bus ride. The results, presented in Table 4.16, indicate that the accessibility of educational and cultural resources in Saskatoon was above the average across the UEY-II communities. However, the accessibility of recreational resources was below the UEY-II average. The accessibility of all three types of community resources declined slightly between 2001 and 2005.

Perceptions of resource availability do not necessarily reflect actual use of resources by children. For example, although about 80% of Saskatoon PMK indicated that educational programs and services were located nearby, fewer than one in five Saskatoon children used them at least once a month in 2005 (see Table 4.14a).

Many PMK reported that they experienced difficulties accessing community programs or services. The three most common reasons, cited in both 2001 and 2005, were “not enough time,” “programs [available only] for older children” and “program times not convenient”(see Table 4.17).

Table 4.17				
Reasons given by PMK for not using community programs or services, Saskatoon and UEY-II communities (percentages, 2001 and 2005)				
	Saskatoon		UEY-II communities	
	2001	2005	2001	2005
Situational				
Not enough time	44.0	42.2	41.0	41.6
Health reasons	3.3	3.4	3.1	3.2
Institutional				
Program costs	33.6	31.0	31.7	31.3
Program times not convenient	35.0	34.6	29.9	33.1
Programs available for older children	40.2	34.2	27.6	28.4
Unaware of programs	30.1	28.2	23.8	29.7
Programs of interest unavailable	19.6	20.2	13.4	17.6
Not enough spaces	13.6	12.4	7.5	9.0
Programs not in preferred language	0.7	1.1	2.8	2.4
Commute difficulty	21.4	16.8	15.9	18.2
Dispositional				
Concerned about safety	8.2	7.6	8.3	8.9
Concerned about quality	7.7	6.0	5.1	6.1
Cultural or religious reasons	1.9	1.6	1.1	3.1

Costs associated with programs or services were another major reason given for not using community programs, mentioned by more than 30% of PMK. Other significant barriers were “unaware of programs,” “programs of interest unavailable” and “commute difficulty.” Smaller percentages of PMK reported barriers in 2005 than in 2001, but the changes were slight.

4.5 Summary

In 2005, Saskatoon had a larger and more diverse kindergarten population than in 2001. Seventeen percent had Aboriginal origins, and more than 40% spoke neither English nor French as their first language.

The vast majority of Saskatoon kindergarten children were in a two-parent family with one or more siblings. As elsewhere in Canada, in 2005, more young children in Saskatoon were living with parents who were healthy and had completed post-secondary education. The percentage of PMK working outside the home declined slightly between 2001 and 2005, with about one in five Saskatoon children living in no-earner families in 2005. The average household income in Saskatoon was higher than the average among the UEY-II communities. However, about one in five children lived below LICO, despite the substantial increase in average household income in Saskatoon in recent years.

The findings from this study point to a variety of risk factors for Saskatoon children in their early development. These factors include being born outside Canada and having a first language other than English or French, a mother in poor health, parents with a low level of education, parents who are unemployed, only one parent in the household and low family income. For example, children born outside Canada, or children whose mother tongue was not English, were two to three times more likely to receive low PPVT-R scores (which signify delayed vocabulary development) than children born in Canada or children who spoke English as their first language. The study also found that children living below LICO in Saskatoon were three to four times more likely than children from the highest-income families to show delayed vocabulary development. Family income level was also strongly related to children’s participation in activities linked to healthy early childhood development, particularly supervised group activities such as coached sports or music or art lessons.

On the other hand, positive factors for early childhood development included having a cohesive family, positive and consistent parents, parents who actively participate in their children’s learning activities, a safe, clean neighbourhood with supportive neighbours, and high use of community resources. For example, the

study found that consistent parenting was strongly related to better cognitive and behavioural outcomes among children. Supportive neighbours appeared to be important in explaining differences in children's social behaviours as well as vocabulary development. In addition, results from both 2001 and 2005 suggest that children who were high-level users of community resources were much less likely to exhibit aggressive behaviours, emotional problems, hyperactivity or delayed vocabulary development.

In all these respects, families with young children in Saskatoon were faring well. More than 90% of families functioned cohesively, and more than 85% of PMK were positive and consistent in their interactions with their children. Data from both 2001 and 2005 also indicate that the majority of PMK were actively engaged in providing a stimulating home environment for their children. Overall, PMK in Saskatoon were much more engaged than those across the UEY-II communities in reading to their children, telling them stories and encouraging them to use numbers on a daily basis.

PMK in Saskatoon thought highly of their neighbourhoods, giving them high marks on factors such as the quality of schools and nursery schools, public transport, safety and cleanliness. The vast majority (about 90%) agreed or strongly agreed that neighbours supported one another in various ways. They also agreed that there were many families with young children in the neighbourhood. On the downside, they gave neighbourhood health facilities a relatively low score, and showed growing concern over neighbourhood safety. As well, about a quarter of PMK in both survey years did not think that residents worked together to solve problems in their neighbourhoods.

The proportion of Saskatoon children in non-parental childcare rose from 47% in 2001 to 61% in 2005. Just over half were cared for by a non-relative either at home or outside the home. Relatives provided care for more than a quarter of children, whereas institutional care facilities provided service for another fifth. The impact of these different care arrangements on developmental outcomes remains an important question that needs further research.

The study results indicate that Saskatoon children had better access to educational and cultural resources than the average among the UEY-II communities. However, the accessibility of cultural resources appeared to decline slightly between 2001 and 2005. The reported accessibility of recreational resources was below the UEY-II average.

In 2005, more than half of Saskatoon children participated in organized sports at least weekly, while the weekly participation rate in unorganized sports was as high as 69%. In addition, about 40% of children took part in other organized activities such as dance, gymnastics or martial arts. These participation rates were all higher than in 2001. The percentage of children taking lessons in music, art or other non-sport activities, as well as the percentage participating in community clubs or leadership programs, declined somewhat between 2001 and 2005. Overall, compared with the UEY-II averages, Saskatoon children had higher participation rates in all group activities, except for community clubs and leadership programs.

Compared with the reported availability of resources, the actual use of resources by children was low. For example, although about 80% of Saskatoon PMK said that educational programs and services were located nearby, fewer than one in five children used them at least once a month in 2005. Many PMK reported that they experienced difficulties accessing community programs or services. Lack of time, unavailability of suitable programs, program costs and lack of program awareness were among the major barriers cited in both 2001 and 2005.

5. Concluding Remarks

The Communities Survey collects information on a wide battery of child, family and neighbourhood characteristics for the Understanding the Early Years (UEY) communities through interviews with parents and direct assessments of children's cognitive skills. It thus enables us to explore relationships between children's developmental outcomes and various individual, family and community factors. This report has presented results from preliminary analyses of this rich database.

As discussed in Chapter 2 (and Appendix A), numerous studies have examined the relationships between young children's development and resources and processes within the family and community. Studies that analyzed the first round of data collected in the UEY pilot communities have also enriched the existing literature by exploring these relationships within Canadian communities.

Rather than merely corroborate the findings from these studies, a major thrust of the current study has been to discover whether any of the factors and processes affecting early childhood development changed in the community between 2001 and 2005. The other focus has been to assess whether any of these changes have influenced young children's developmental outcomes. Readers can interpret the data results and draw conclusions in light of their own community context, as well as in reference to the existing literature, including findings from previous studies at the UEY pilot sites.

However, results presented here that appear to reflect changes (or no changes) at the community level should be interpreted with caution for a number of reasons. First, the results are based on relatively small samples. Second, the sample of children (and their parents) who participated in the 2001 survey may have different demographic characteristics from those who participated in the 2005 survey. Third, as Willms (2003) points out, UEY was designed to include a broad range of measures so that communities could get a general profile of their young children. To measure change in this context, especially UEY's impact on child development, would require more accurate measurement tools and studies of longer duration. Fourth, the data analyses presented in this report are mostly based on simple, bilateral cross-tabulations. To verify the nature of the relationships between individual, family and community factors and children's developmental outcomes, as well as to infer causal relationships, would require more rigorous analyses, using complex statistical models, or experimental research.

This report has presented only a small proportion of information gathered using the Communities Survey. Much more information can be drawn from this wealth of data through further work designed to address questions such as:

- What are the key factors associated with various children's outcomes as well as with their participation in different activities at home and in the communities?
- How do these factors compare in the way they affect developmental outcomes?
- Do these impacts change as circumstances change?

With the data from the Communities Survey, it is also possible to determine who is more likely to report lack of time or program costs as barriers to use of community resources, who is more likely to use educational, recreational and cultural resources, and whether the profiles of children and their families using different kinds of resources differ.

However, because the Communities Survey was designed to provide a broad picture of the participating communities, it is not an ideal tool for gathering the sort of detailed information required for planning concrete community action. For example, the Communities Survey has helped us identify some of the barriers inhibiting access to early childhood programs and services available in the community. Yet it does not provide information on what barriers are associated with specific community programs or services, what kinds of programs or services parents are looking for but are not yet available, or what types of programs or services are avoided because of their costs. New community-based data collections may have to be initiated in order to acquire such specific information.

A more significant contribution of the Communities Survey may lie in the example it has set for the types of data that need to be collected and the types of data collection strategies that need to be adopted by the community. By presenting data from the Communities Survey, this report is helping the UEY initiative achieve its twin goals of providing community-specific information related to early childhood development and encouraging evidence-based decision making at the community level.

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Appendix A

Early Childhood Development: Findings from Research

The literature on early childhood development is vast. For the purposes of this study, this section provides an overview of studies that focus on four categories of developmental influences. These categories are individual child characteristics, family resources, family processes and opportunity structures. They are similar to the categories illustrated in Figure 2.1.

1 Individual Child Characteristics

Individual child characteristics refer to a child's biological attributes and to demographic characteristics such as gender and ethnic and cultural background. The emotional, cognitive and behavioural characteristics of the child – which not only influence developmental outcomes but are outcomes in themselves – are also considered in this category.

Gender

Research has identified gender as an important factor in developmental outcomes. On entering kindergarten, girls are generally slightly better than boys in reading skills and prosocial behaviour (i.e., behaviour intended to benefit others), are about the same as boys in mathematics and general knowledge, and are less likely to exhibit problem behaviours than boys (Maxwell & Clifford 2004). These gender differences are found in Canadian data (i.e., National Longitudinal Survey of Children and Youth – NLSCY) as well as in data from other countries including the United States, the United Kingdom and Australia.

Ethnicity, place of birth and first language

Children's ethnicity, place of birth and first language are also significant in explaining some differences among young children. For instance, a 2002 study (cited in Noble et al. 2005) found that African American, Hispanic and other children had lower math and reading skills at the beginning of kindergarten than Caucasian or Asian children. Another study found that racial disparities in school readiness are important and can be persistent (Noble et al. 2005). Worswick (2001) finds that Canadian children of immigrants whose first language is either English or French have especially high outcomes in reading and writing compared with those whose first language is neither English nor French.

However, having immigrant parents is not necessarily a risk indicator for psychiatric disorder or poor school performance (Munroe-Blum et al. 1988). Children of new immigrants, despite generally higher poverty rates, are less likely to have mental health problems than non-immigrant children (Beiser et al. 1998). Worswick's study (2001) also shows that immigrant children who initially perform poorly in Canadian schools can catch up with non-immigrant children in reading, writing and mathematics by age 13.

Social competence

Studies that have examined the social competence of young children (e.g., responsiveness, flexibility, empathy, caring, communication skills and sense of humour) find that these characteristics are very important in child development (Parrila et al. 2002). Prosocial skills result in improved health and well-being, greater participation in the community and active engagement in socially beneficial behaviours, such as sharing, offering help, cooperating, showing concern for others and promoting positive social relationships (Parrila et al. 2002:4). Conversely, antisocial or aggressive behaviour is often associated with negative developmental outcomes. A difficult temperament in infancy has also been linked to later emotional and social problems. For example, boys showing signs of antisocial behaviour in kindergarten were delinquent in adolescence (Bertrand 2001). In contrast, good-natured and obedient children are less likely to manifest behavioural problems such as hyperactivity, physical aggression and oppositional behaviour (Willms 2002).

Emotional development

Studies focusing on emotional development reveal that emotions can also help or hinder the growth of skills in children and are at the centre of children's lives. Emotions affect their sense of well-being, sense of self and understanding of the world (Daly 2004). Emotions provide the basis for human attachments and social interaction with others. Children do best when their self-esteem, self-confidence and self-reliance are nurtured, because "a confident, trusting child, secure in his belief in his own particular abilities and what it is that makes him unique, will play, concentrate, love, give and communicate better" (Daly 2004:23). As well, children with strong emotional skills are less often upset, are more relaxed, are more focused on tasks at hand, are more socially skilled, have fewer behavioural problems, and are in general better prepared for life and learning (Daly 2004).

2 Family Resources Factors

Socio-economic status

A major conclusion from childhood studies is that early childhood outcomes are strongly related to families' socio-economic status. As summarized by Bertrand, "from birth to death, higher socio-economic status is related to better academic achievement, lower rates of illness and even lower rates of accidents and suicides" (2001:4). The term "socio-economic status" refers to the relative position of a family or individual in society, based on access to or control over wealth, prestige and power (Willms 2000). In early childhood research, socio-economic status is often represented by a combination of factors including the family's income, the parents' level of education and their occupation.

Willms (2002) finds that children in high socio-economic status families are less likely than those in low socio-economic status families to score below national averages in vocabulary, mathematics, and motor and social skills. Results from other studies indicate that socio-economic status often affects other aspects of life such as the family environment. For example, it is related to the amount and quality of verbal interactions between parents and children, which ultimately affect children's language and cognitive development (Papalia et al. 2004).

Family income

Among the factors contributing to socio-economic status, family income has received the most attention in studies of child development. Hernandez (1993) emphasizes that the family income indicates the level of economic resources available to a child. Many studies find that family income and wealth are significantly associated with the health and educational performance of children.⁵ Ross and Robert (1999) report that over 35% of children in low-income families exhibit delayed vocabulary development, compared with 10% of children in higher-income families. A study of American Indian families also showed that when family income is no longer below the poverty line, there is a significant reduction in behavioural symptoms of oppositional/defiant and conduct disorder (Willms n.d). A recent study by Phipps and Lethbridge (2006) also concluded that higher income is almost always associated with better outcomes for children, particularly cognitive and behavioural outcomes. These findings indicate that a large number of Canadian children face risks associated with low family income. For example, recent statistics from the NLSCY reveal that about 35% of Canadian children experience at least one low-income year, while 11% live in low-income families for at least 5 or 6 years (findings from three cycles of NLSCY data) (Phipps & Lethbridge 2006).

⁵ For instance, Sewell and Hauser (1975), Cornia (1984), Haveman and Wolfe (1994), Hill and O'Neill (1994), Lipman et al. (1994) and Dooley et al. (1998).

Parents' level of education

The parents' level of education also directly affects a child's health and educational outcomes: the higher the parents' education level, the higher the child's attainment tends to be.⁶ Leibowitz (1974) argues that this is because educated parents are likely to spend more quality time with their children than less educated parents. More important, as Parcel and Menaghan (1994) suggest, parental education is perhaps one of the most significant factors affecting a child's developmental outcomes because education reflects the knowledge, experience and aspirations that parents bring to their children.

Parents' labour market participation

The parents' employment and work schedule have also been shown to directly affect a child's health and educational outcomes. Hoffman (1989) explains that parents in dual-earner families place more emphasis than other parents on independence training for children. The research finds that independence is a beneficial characteristic when children are involved in learning activities (Thomas 2006).

Parents' health

Parents' health, especially the mother's physical and emotional health, can affect the amount and quality of time and attention that parents devote to their children. Since time and attention are instrumental in the healthy development of children, parents affected by depression or addictions will likely negatively impact a child's development. Willms supports this view, explaining that "mothers suffering from post-partum depression can adversely affect the quality of maternal-infant interactions, resulting in poorer social and cognitive developmental outcomes" (n.d.:11). Significant levels of parental depression, especially maternal depression, also increase a child's tendency to develop anxiety and behavioural problems (Landy & Tam 1998). Gerhardt expands on this finding by explaining how mothers who drink, take recreational drugs and have poor eating habits affect their children's stress response, making them overly fussy or temperamental (2004).

The health of the mother also directly affects the health and educational outcomes of her child. For example, children born to healthy mothers tend to have higher birth weights and, as a result, experience fewer health problems (Barrera 1990). Graham (1972) and Schultz (1987) also report that children of healthy mothers are healthier than children of unhealthy mothers. Poor parental mental health has been identified as a risk factor for psychiatric disturbances in immigrant and refugee children (McCloskey & Locke 1995; Mghir et al. 1995).

Family structure

Studies find that single-parent families, families suffering marital breakdown, families in which the mother gave birth at a young age, and large families with little social support can negatively affect early childhood development. Kohen et al. (1998) and Willms (2002), for example, find that behavioural problems in children are related to many factors including female-headed households, large households and younger maternal age. Willms (2002) also finds that children who live in single-parent families are more likely to have behavioural problems than children who live with teenaged mothers but who have a second parental figure. Additionally, the risk of intellectual delays, as well as mental, emotional or physical health problems, increases for children aged 4 to 11 years who live in single-parent or adolescent-parent homes (Landy & Tam 1998).

Family size affects children's developmental outcomes because siblings compete for the limited time and financial resources of their parents. The larger the number of siblings, the less parental time and money there are for each child (Becker & Tomes 1976). In particular, as Hanushek (1987) suggests, private time spent with individual children, which is necessary to a child's development, decreases as family size increases. However, Hernandez (1989, 1993) argues that siblings who grow up in a large family can share the companionship of childhood, and this can influence childhood development in a positive way.

⁶ See Haveman and Wolfe (1995) for a review of these studies.

A number of studies find that single-parent status can have a significant negative impact on children's educational attainment.⁷ Krein and Beller (1988) find that this negative effect increases with the number of years spent in this type of family structure, and the impact is greater for boys than girls. Other studies find that single-parent status is strongly associated with psychiatric disorders, poor school performance and social problems.⁸ Also, because single parents often have to survive on only one income, they are likely to face more challenges and stress in raising their children (HRSDC and Healthy Manitoba 2003). Children living in single-parent families thus tend to be exposed to more parental stress and, as a result, may feel more distressed, depressed, fearful, sad, rejected and worried than children who live with two parents (Judith et al. 1980, 1989).

A mother's age at the birth of her child is associated with the child's developmental outcomes, including health and cognitive skills (Shariff & Ahn 1995; Hill & O'Neill 1994). The older the mother at childbirth, the better the child's developmental outcomes (Dahinten & Willms 2002), with children of adolescent mothers showing less favourable outcomes in most aspects of development. This may be because teenaged mothers tend to have lower socio-economic status and are more likely to raise their children as single parents. According to Parcel and Menaghan (1994), it may also reflect the fact that a mother's maturity, sense of control and patience, which affect child development, all tend to increase with age.

3 Family Processes Factors

The family has tremendous influence on the healthy development of children. It is where children spend the majority of their time, especially in the first 5 years of life, and where they learn skills, values and attitudes that will help them participate in society and build self-esteem (Canadian Council on Social Development 2006).

Parent-child interactions

Research shows that the most important family processes include parenting style (the ways in which parents interact with their children), the cohesiveness of the family and the extent to which children are regularly engaged in learning activities (Willms 2003; Phipps & Lethbridge 2006). These factors help protect children from the impact of low socio-economic status and may explain why not all children in low-income families are unhealthy and not all children in middle- to high-income families are healthy.

Specifically, studies consistently indicate that positive and authoritarian parenting – by parents who are firm but loving and who set realistic standards as well as clear and consistent rules for their children – is related to better developmental outcomes in health, social competence, academic achievement, school completion, and emotional and behavioural development (Patterson et al. 1989; Chao & Willms 1998; Hoghugh 1998; Landy & Tam 1998; Ross et al. 1998; Feinstein & Symons 1999; Miller et al. 2002; Papalia et al. 2004). On the other hand, Kagan (1994) and Beiser et al. (1998) find that poor parenting (uncaring on the one hand or overprotective on the other) is strongly related to children's emotional and behavioural problems, sometimes more so than other family characteristics. A study by Landy and Tam (1998) finds that parenting practices are crucial to the development of at-risk children, such as those with a teenaged mother or those in a single-parent family, a dysfunctional family or a family with less social support.

Family cohesion

Research has shown that family cohesion is another important factor affecting healthy child development. Family cohesion refers to how well family members communicate with each other, work together, and how well family members function as a unit. Positive family functioning can help mitigate the influence of other factors in child development, such as family income and family structure (Schaffer 1998). In Canada, while the majority of children grow up in families that are functioning well, there is a small percentage who do not. (Human Resources and Development Canada and Statistics Canada 2000-2001). Children living in dysfunctional families are about 35% more likely to display signs of problematic behaviour such as aggression or difficult temperament than their counterparts living in families that are functioning well (Racine, Y. and Boyle, M. 2002). This relationship between family functioning and behaviour problems is

⁷ Blau and Duncan (1967), Freeman (1974), Featherman and Hauser (1978), Haveman et al. (1991), Sandefur et al. (1992) and McLanahan and Sandefur (1994).

⁸ Dooley and Lipman (1996), Curtis et al. (1996), Dooley et al. (1998) and Curtis et al. (2004).

particularly evident when examining the display of signs associated with aggressive behaviours, such as getting into fights, kicking, biting and/or destroying belongings.

Parents' level of engagement

Parents who are highly engaged with their children have a major influence on their children's development (Rutter 1990). Parental attention during a child's early years – specifically, the extent to which the parent is emotionally available – is particularly crucial to development (Gerhardt 2004). Furthermore, studies find that the time parents spend reading to their children has a significant impact on the children's development regardless of the family's socio-economic status (Willms 2003; FSU Center for Prevention and Early Intervention Policy 2005).

4 Opportunity Structures: Neighbourhood and Community Factors

As an African proverb says, "it takes an entire village to raise a child." Researchers also point out that children's "readiness for school success is a community responsibility, not just the responsibility of parents and preschool teachers" (Maxwell & Clifford 2004:2).

It is true that neighbourhoods and communities have always been at the centre of the learning and developmental activities of young children. They provide opportunities for children to play, learn, and interact with adults and peers by providing important resources and activities such as daycare, schools, libraries, public pools and parenting groups. However, research on community effects has been limited until recently (Connor & Brink 1999). The important role of the community in the development of young children is just beginning to be recognized and explored.

A general conclusion from studies of the role of communities in child development is that both the physical and social characteristics of a community are important (Jencks & Mayer 1990; Canadian Institute for Health Information 2006). These characteristics include physical conditions relating to the risk of injury to children, access to public facilities for children, neighbourhood/community safety (e.g., crime rates), neighbourhood affluence/resources, quality of childcare and schools, community cohesion, quality of role models, participation in community activities and the community's willingness to intervene for the common good (Connor & Brink 1999; Curtis et al. 2004; Hertzman & Kohen 2003; Canadian Institute for Health Information 2006).

Neighbourhood affluence

Studies find that neighbourhood affluence is an important community characteristic. Affluent communities often have more resources and opportunities for young children and their families. Hertzman and Kohen (2003) find that a neighbourhood with plentiful resources promotes child well-being by providing stimulating activities. Specifically, their study finds that affluent neighbourhoods can have a positive effect on children's IQ scores and verbal abilities. Another study (Canadian Institute for Health Information 2006) finds that neighbourhood affluence has a significant impact on children's health, even after the effects of parental income, demographic characteristics and health factors are taken into account.. Willms also concludes that "children's development is more likely to flourish if families have access to educational, cultural and recreational resources: These are important not only because they contribute directly to children's development, but also because they foster social support and increase social capital within the community" (2003:34).

Childcare quality

Childcare is second in importance to the family as the place where most early childhood development occurs, and over the years there has been an increasing reliance on childcare by non-relatives (Shonkoff & Phillips 2000). The quality of childcare is thus an important factor in the overall quality of community educational resources. Quality in childcare is defined by the types of interactions between children and care providers, resources within the care environment and the types of activities children are engaged in while in care.

The influence of childcare on child development can be positive or negative, depending on the quality of care (Friendly et al. n.d.). Studies find that children attending high-quality care tend to be more confident and self-regulated, while those attending low-quality care tend to be less cooperative and exhibit more behavioural problems (Doherty 1991; Connor & Brink 1999; Gagné 2003). High-quality childcare can also protect children against the effects of negative family experiences (Shonkoff & Phillips 2000) or low socio-economic status. A study by Raver and Knitze (2002:13) finds that low-income children in high-quality childcare are significantly better off, cognitively and emotionally, than similar children in poor-quality settings. In general, children attending centre-based care demonstrate higher cognitive and language outcomes and a higher level of school readiness than children in other types of settings (Connor & Brink 1999; O'Brien et al. 1994; Lipps & Yiptong 1999).

School environment

Schools are an integral part of any community. Since children spend a great deal of time in school, their experiences there can have a major impact on their overall well-being. This impact is so profound that it has been claimed that education is key to children's capacity development (Canadian Council on Social Development n.d. B).

A number of factors influence a child's success in school. For instance, research has shown that successful children are those who were nurtured or stimulated prior to entering school. Within the school setting, it is how teachers interact with children that ultimately affects children's social and emotional outcomes (Raver & Knitze 2002). This interaction in turn can be affected by the way children behave. Children who act in antisocial ways tend to be less accepted by classmates and teachers, and receive less instruction and positive feedback (Raver & Knitze 2002). Teachers themselves can also perpetuate high levels of misbehaviour from children by ignoring problem behaviours or dealing too harshly with them (Raver & Knitze 2002).

There are 10 key ways that schools and/or communities can assist childhood development (Maxwell & Clifford 2004:2).

- Smooth the transition between home and school.
- Strive for continuity between early care and education programs and elementary schools.
- Help children learn and make sense of their world.
- Make a commitment to every child's success.
- Show they are committed to every teacher's success.
- Introduce and expand strategies that have been shown to improve achievement.
- Function as learning organizations that change their practices if they do not help children.
- Serve children in communities.
- Take responsibility for results.
- Maintain strong leadership.

Community cohesion

Cohesive communities – those whose members are well connected and identify strongly with the community – have an important positive influence on child development and contribute to improved outcomes (Canadian Council on Social Development 2006). These communities offer parents and children an opportunity to interact with one another and with other families to share information, reduce uncertainty and lessen parental anxiety (Moore 2005). Children who grow up in this type of environment tend to be more prosocial. As Parrila et al. note, “parents that rated their neighbours as better role models or as more supportive or helpful tended to rate their children as more prosocial” (2002:35). Wilson (1987) also finds that neighbours' socio-economic status, educational level and performance, and values can influence children's ambition and drive.

Social support

Research also shows that neighbourhoods that have high levels of engagement and are willing to intervene for the common good tend to be better places to raise children. This is because “(a) the high local expectations for informal social control and mutual support of children allow child surveillance and other parenting tasks to be shared with neighbours, and (b) parents are linked to each other through their participation in community activities, including organized worship and support of local schools” (Jones et al. 2002:7). In contrast, an absence of community networks often results in family isolation, lower levels of trust between neighbours and lack of political mobilization, all of which can lead to fewer amenities (Jones et al. 2002).

Peer interactions

Children’s peers are another important element in child development. They are part of the process of growing up and help children learn how to interact with others. Establishing relationships with others is one of the most important developmental tasks of early childhood, and the preschool years are a time when social skills expand dramatically. The socialization process is so important during this stage of life that “the success with which young children accomplish this objective can affect whether they will walk pathways to competence or deviance as they move into middle childhood and adolescent years” (Shonkoff & Phillips 2000:180). Socialization teaches children the standards and values of society and allows them to become integrated into their larger social world (Daly 2004).

At 9 to 12 months of age, infants begin to watch other people, thus starting the socialization process (Shonkoff & Phillips 2000). Attachments developed early in life can lay the foundation for later social relationships and happiness. As Daly states, “no one can become fully human without social experiences” (2004:134). Close friendships have been linked to better social and academic outcomes (Canadian Council on Social Development 2006). Friendships also increase self-esteem and feelings of self-worth (Daly 2004). On the other hand, being rejected as a child is related to psychiatric problems and poor academic achievement (Shonkoff & Phillips 2000). However, it is not close friendships in themselves that are important to healthy development; these friendships have to be with prosocial peers.

5 UEY Findings on Neighbourhood and Community Factors

At the core of the Understanding the Early Years (UEY) research is an intent to discover the relative importance of individual, family and community factors in the development of young children and their readiness to learn. The purpose is to provide communities with critical insights into what actions might be most effective in further improving children’s outcomes.

The results from the UEY pilot sites show that schools with the best average school population scores – assessed using the Early Development Instrument (EDI) – tend to be located in neighbourhoods with few socio-economic risk factors, while those with poorer average school population scores are often in the higher-risk areas. However, the spatial distribution of outcomes does not entirely match socio-economic status patterns. The average school population score in several low-risk neighbourhoods is unexpectedly low on all components of development assessed using the EDI, while the average school population score in some higher-risk neighbourhoods is high on many of the components of development. This observation indicates that many children in relatively poor areas are faring quite well compared with some children in affluent areas.

Analyses of the unique roles of the community in children’s developmental outcomes identified a number of community characteristics as being more important than others. They include neighbourhood quality and safety, the length of time residents live in the community (i.e., neighbourhood stability), social support (from family members and friends), social capital (support available collectively to groups within a community) and access to and use of community resources.

A general finding is that different community characteristics have an impact on different aspects of child development. For example, children in families receiving a high level of social support are less likely to be at risk in the cognitive domain, and living in a neighbourhood with a high level of social capital is associated with an increase in positive behavioural outcomes. As well, children living in neighbourhoods that contain many families with children are more likely to be well behaved, possibly because of the opportunities for social interaction.

Better outcomes are also seen in children who are more involved in their communities through their use of libraries, book clubs and educational centres, as well as those whose parents are involved in voluntary organizations. For example, families that make use of recreational, educational and leisure facilities have children with better cognitive scores. Vocabulary development is influenced by children's use of community educational resources such as libraries, book clubs, literacy programs, educational centres or workshops. Other factors affecting vocabulary development are parental use of family and parent resource centres, as well as the mother's education and the child's knowledge of English. On the other hand, children of families who feel they encounter many barriers to participation in community programs and services achieve lower scores on learning assessments.

The UEY study data show that the average use of community resources is rather low, at 3.4 on a 10-point scale, even though about 70% of parents reported that most educational resources are within walking distance or are a short drive or bus ride away. About 50% said the same with respect to community cultural and recreational resources. The North York study, for one, found that participation rates in community educational resources, recreation centres and organized sports seem to be associated with family characteristics: mothers' educational level, household income, and parental employment, first language and immigrant status.

According to parents, the biggest barriers to using community resources are time, program costs and lack of knowledge about the availability of programs and services. However, barriers may also include physical and social obstacles. The effects of barriers are identifiable and cumulative, and pose a real problem for many families: the more barriers a family faces, the more likely their children are to experience problems.

The UEY findings suggest that the extent to which a community can promote developmental opportunities for young children is determined by both the nature of its offerings and its commitment to ensuring their availability. Just as important as the availability of the programs is the community's effort to ensure a sense of community and promote the message that opportunities are available to all children and families. The findings emphasize the need to promote social interaction and integration within a community, raise awareness about the importance and availability of community resources, ensure that resources are available and address access barriers.

In summary, the family has an extremely important role to play in a child's development. Research indicates that "during the pre-school years, the important [family] factors are parenting skills, the cohesiveness of the family unit, the mental health of the mother, and the extent to which parents engage with their children, especially in reading to the child" (Willms n.d.:30). Furthermore, although demographic characteristics of the family – such as household income and parental education and employment – play an important role in development, there are strong effects associated with approaches to parenting, engagement in the community, use of resources, neighbourhood social capital and social support that are independent of family demographics (Willms 2005:25).